New York State
Department of Environmental Conservation

Division of Lands & Forests

Vanderwhacker Mountain Wild Forest

Unit Management Plan/Environmental Impact Statement

Essex County: Minerva, Newcomb, North Hudson, Schroon
Warren County: Chester, Johnsburg
Hamilton County: Indian Lake

April 2005

George E. Pataki
Governor

Denise M. Sheehan
Acting Commissioner

Lead Agency:
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-4254

For further information contact:
Michael Curley
PO Box 220
Warrensburg, NY 12885
518/623-1265

GEORGE E. PATAKI
GOVERNOR

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK 12233-1010

DENISE M. SHEEHAN
ACTING COMMISSIONER

M E M O R A N D U M

TO: The Record

FROM: Acting Commissioner Denise M. Sheehan

DATE: APR 07 2005

SUBJECT: Vanderwhacker Mountain Wild Forest Final Unit Management Plan/FEIS (Final UMP/FEIS)

The Final UMP/FEIS for Vanderwhacker Mountain Wild Forest has been completed. The Final UMP/FEIS is consistent with the guidelines and criteria of the Adirondack Park State Land Master Plan, the State Constitution, Environmental Conservation Law, and Department rules, regulations and policies. The Final UMP/FEIS included management objectives and a five year budget and is hereby approved and adopted.

Denise M. Sheehan
Acting Commissioner

4/7/05
Date

RESOLUTION AND SEQRA FINDINGS
ADOPTED BY THE ADIRONDACK PARK AGENCY
WITH RESPECT TO
VANDERWHACKER MOUNTAIN WILD FOREST
UNIT MANAGEMENT PLAN

March 11, 2005

WHEREAS, Section 816 of the Adirondack Park Agency Act directs the Department of Environmental Conservation to develop, in consultation with the Adirondack Park Agency, individual management plans for units of land classified in the Master Plan for Management of State Lands and requires such management plans to conform to the general guidelines and criteria of the Master Plan; and

WHEREAS, in addition to such guidelines and criteria, the Adirondack Park State Land Master Plan prescribes the contents of unit management plans and provides that the Adirondack Park Agency will determine whether a proposed individual unit management plan complies with such general guidelines and criteria; and

WHEREAS, the Department of Environmental Conservation has prepared a unit management plan for the Vanderwhacker Mountain Wild Forest; and

WHEREAS, this action is a Type I action pursuant to 6 NYCRR Part 617 for which the Department of Environmental Conservation is the lead agency and the Adirondack Park Agency is an involved agency; and

WHEREAS, a final environmental impact statement, dated February 2005, was accepted and noticed in the Environmental Notice Bulletin by the Department of Environmental Conservation as of March 9, 2005; and

WHEREAS, the Department of Environmental Conservation has consulted with the Adirondack Park Agency staff in the preparation of the proposed plan; and

WHEREAS, the Agency is requested to determine whether the final Vanderwhacker Mountain Wild Forest Unit Management Plan, dated February 2005, is consistent with the Standards and Guidelines of the Adirondack Park State Land Master Plan; and

WHEREAS, the Adirondack Park Agency has reviewed the proposed Vanderwhacker Mountain Wild Forest Unit Management Plan; and

WHEREAS, the design of existing, long-standing drive-in campsites and group campsites must meet the guidelines and criteria of the State Land Master Plan; and

WHEREAS, the Department has committed to continued consultation with the Agency on the development of site design guidelines and criteria, and to develop a baseline inventory and assessment of all established campsites; and

WHEREAS, the Department has committed, in consultation with the Agency, to implement site design guidelines and criteria for roadside campsites so that they can be renovated or relocated and conform to the guidelines and standards of the State Land Master Plan; and

WHEREAS, the site guidelines and criteria will be submitted for Agency review in future Wild Forest unit management plans; and

WHEREAS, the Department and the Agency have committed to develop site design guidelines and criteria to conform to Americans with Disabilities Act guidelines; and

WHEREAS, the Department will consult with the Agency on the development of specific routes for snowmobile trails and all future construction and maintenance activities involving wetlands in accordance with Article 24 wetlands regulations, which review process will minimize impacts on the wetlands resources and Wild Forest character of the Unit; and

WHEREAS, the Department has committed to initiate a Limits of Acceptable Change study to evaluate user impacts on campsite areas and which will provide an opportunity to improve management of appropriate recreational opportunities and assist the Department and Agency in assessing impacts and selection of specific management actions; and

WHEREAS, the Department has committed to collect and analyze use data on Muller, Oliver and Cheney Ponds in order to increase the understanding of the carrying capacity and use of these water bodies and their ability to withstand public use and to project user impacts of water access proposals at these and other locations;

NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 816 of the Adirondack Park Agency Act, the Adirondack Park Agency finds the Vanderwhacker Mountain Wild Forest Unit Management Plan, dated February 2005, conforms with the general guidelines and criteria of the Adirondack Park State Land Master Plan; and

BE IT FURTHER RESOLVED, that the Adirondack Park Agency finds pursuant to 6 NYCRR Part 617.11 that the management actions contained therein are:

1. Intended to ensure the management of the Unit complies with all applicable rules, regulations, policies, guidelines, laws, constitutional provisions and the Adirondack Park State Land Master Plan. (FEIS p. 85)

2. Intended to permit and encourage recreational use levels consistent with the protection of the Unit’s natural resources and character. (FEIS p.98)

3. Intended to preserve and protect wetland community vegetation and to minimize the amount of wetland disturbances and impacts caused by the construction, maintenance and use of structures and improvements. (FEIS p. 82)

4. Intended to protect species and ecological communities identified as rare, threatened and endangered. (FEIS p. 82)

5. Intended to ensure compliance with the Americans with Disabilities Act by improving access and creating opportunities for people with disabilities. (FEIS p. 99)

6. Intended to prevent the spread of invasive species. (FEIS p. 82)

7. Intended to perpetuate, support and expand a variety of wildlife recreational opportunities, including wildlife observation and photography, and sustainable hunting and trapping pursuits. (FEIS p. 84)

8. Intended to manage wildlife and fisheries consistent with Wild Forest guidelines, to minimize impacts on the fisheries resource and maintain the diversity of coldwater and warmwater fish populations in the Unit. (FEIS p. 84)

9. Intended to improve the monitoring of public use, provide a diverse range of camping opportunities, accurately monitor and quantify current levels of camping use, provide a trail system that offers the public appropriate opportunities for desired levels of permissible use, and protect the natural resources of the Unit. (FEIS pp. 85, 87, 91 and 98)

10. Intended to insure that campsite and lean-to locations comply with guidelines of the State Land Master Plan. (FEIS p. 91)

11. Intended to comply with State Land Master Plan guidelines concerning use of All-Terrain Bicycles in Wild Forest and to provide appropriate All-Terrain Bicycle opportunities that are desirable by the public and consistent with the protection of natural resources. (FEIS p. 93)

12. Intended to recognize the historic and cultural significance of the Vanderwhacker Mountain fire tower and associated facilities, to affect its restoration and allow the public to access and appreciate it in a safe manner. (FEIS p. 97)

13. Intended to address natural and cultural resource management issues through the Limits of Acceptable Change approach to recreation management. (FEIS p. 58)

BE IT FURTHER RESOLVED, that consistent with the social, economic and other essential considerations, from among the reasonable alternatives, the proposed Vanderwhacker Mountain Wild Forest Unit Management Plan seeks to minimize or avoid adverse environmental effects to the maximum extent practicable, including the effects disclosed in the environmental impact statement; and

BE IT FINALLY RESOLVED, that the Adirondack Park Agency authorizes its Executive Director to advise the Commissioner of Environmental Conservation of the Agency's determination in this matter.

Ayes: Whaley, Chair; Mezzano; Rehm; Townsend; Ulrich; Wray; Beach (DED); Buchanan (DEC); Hoffman (DOS)

Nays: None

Abstentions: None

Absent: Kissel; Roberts

PREFACE

The Vanderwhacker Mountain Wild Forest Area Unit Management Plan has been developed pursuant to, and is consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the Adirondack Park State Land Master Plan, Department of Environmental Conservation ("Department") rules and regulations, Department policies and procedures and the State Environmental Quality and Review Act.

Most of the State land which is the subject of this Unit Management Plan (UMP) is Forest Preserve lands protected by Article XIV, Section 1 of the New York State Constitution. This Constitutional provision, which became effective on January 1, 1895 provides in relevant part:

> The lands of the state, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, or shall the timber thereon be sold, removed or destroyed.

ECL §§3-0301(1)(d) and 9-0105(1) provide the Department with jurisdiction to manage Forest Preserve lands, including the Vanderwhacker Mountain Wild Forest Area.

The Adirondack Park State Land Master Plan ("Master Plan") was initially adopted in 1972 by the Adirondack Park Agency ("APA"), with advice from and in consultation with the Department, pursuant to Executive Law §807, now recodified as Executive Law §816. The Master Plan provides the overall general framework for the development and management of State lands in the Adirondack Park, including those State lands which are the subject of this UMP.

The Master Plan places State land within the Adirondack Park into the following classifications: Wilderness; Primitive; Canoe; Wild Forest; Intensive Use; Historic; State Administrative; Wild, Scenic and Recreational Rivers; and Travel Corridors. The lands which are the subject of this UMP are classified by the Master Plan and described herein as the Vanderwhacker Mountain Wild Forest Area.

For all State lands falling within each major classification, the Master Plan sets forth management guidelines and criteria. These guidelines and criteria address such matters as: structures and improvements; ranger stations; the use of motor vehicles, motorized equipment and aircraft; roads, jeep trails and State truck trails; flora and fauna; recreation use and overuse; boundary structures and improvements and boundary markings.

Executive Law §816 requires the Department to develop, in consultation with the APA, individual UMPs for each unit of land under the Department's jurisdiction which is classified in one of the nine classifications set forth in the Master Plan. The UMPs must conform to the guidelines and criteria set forth in the Master Plan. Thus, UMPs implement and apply the Master Plan's general guidelines for particular areas of land within the Adirondack Park.

Executive Law §816(1) provides in part that "(u)ntil amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park."

It is important to understand that the State Land Master Plan has structured the responsibilities of the Department and the Agency in the management of State lands within the Adirondack Park. Specifically, the APSLMP states that:

"..... the legislature has established a two-tiered structure regarding state lands in the Adirondack Park. The Agency is responsible for long range planning and the establishment of basic policy for state lands in the Park, in consultation with the Department of Environmental Conservation. Via the master plan, the Agency has the authority to establish general guidelines and criteria for the management of state lands, subject, of course, to the approval of the Governor. On the other hand, the Department of Environmental Conservation and other state agencies with respect to the more modest acreage of land under their jurisdictions, have responsibility for the administration and management of these lands in compliance with the guidelines and criteria laid down by the master plan."

In order to put the implementation of the guidelines and criteria set forth in the APSLMP into actual practice, the DEC and APA have jointly signed a Memorandum of Understanding concerning the implementation of the State Land Master Plan for the Adirondack Park. The document defines the roles and responsibilities of the two agencies, outlines procedures for coordination and communication, defines a process for the revision of the APSLMP, as well as outlines procedures for State land classification, the review of UMPs, state land project management, and state land activity compliance.

No Action Alternative or **Need for a Plan**

From a legal perspective, the No Action alternative is not an option. Section 816 of the Adirondack Park Agency Act (Executive Law) requires the Department of Environmental Conservation to develop, in consultation with the Adirondack Park Agency (APA), individual unit management plans (UMPs) for each unit under its jurisdiction classified in the Adirondack Park State Land Master Plan (APSLMP). In addition a UMP serves as a mechanism for the Department to study and identify potential opportunities for providing access to the Forest Preserve for persons with disabilities in accordance with the Americans with Disabilities Act (ADA of 1990). The UMP also serves as an administrative vehicle for the identification and removal of nonconforming structures as required by the APSLMP.

From an administrative perspective, the No Action alternative is not an option, because the UMP provides necessary guidance for staff to manage the lands of the unit in a manner that is most protective of the environment while at the same time providing the most enjoyable outdoor recreation opportunities for the public. Without the UMP, the sensitive environmental resources of the unit could be impacted negatively. It is highly likely that public enjoyment of such impacted resources would decrease. Management of the lands of this Unit via a UMP allows the Department to manage use of the lands in order to improve public use and enjoyment of the area, avoid user conflicts, prevent over-use of the resource (e.g., through trail designations, access restrictions, placement of campsites and lean-tos in relation to a sensitive resource, etc.), and allows for public input into decision-making.

Alternatives to activities proposed in the UMP will be found in Section IV of this document, beginning on page 81 and in Appendix J.

TABLE OF CONTENTS

Acknowledgments

DEC Planning Team Members:

Andrew Blanchette (retired)	Operations
Jay Bloomfield	Water
John Chambers	Forest Rangers
Michael Curley	Forestry
Les Eggleton	Real Property
Clive Friend	Operations
Robert Inslerman (retired)	Wildlife
Paul Jensen	Wildlife
Steven Ovitt	Forest Rangers
Scott Quinn	Water
Edwin Russell	Forest Rangers
William Schoch	Fisheries

APA Staff representatives:

Charles Scrafford (retired)
Walter Linck

Other staff contributors:
Howard Lashway (retired), Richard Fenton, Brian Finlayson, Michael Grove, Gary Roberts (retired), Mary Lupo, Thomas Martin, Tad Norton, Jim Papero (retired), Kenneth Hamm, Sandra Garlick, Karyn Richards, John Keating, Douglas Bernhard, Sunita Halasz (APA), Kris Alberga

Additional contributors:
John Paradis and Dick Sage

SECTION I. INTRODUCTION:

A. Area Overview (refer to map in Appendix K)

The Vanderwhacker Mountain Wild Forest (VMWF) is located in the central Adirondack Park within the towns of Minerva, Newcomb, Schroon Lake, North Hudson (Essex County), Johnsburg, Chester (Warren County), and Indian Lake (Hamilton County). The unit[1] is located within the Hudson River watershed and the lesser watersheds of the Boreas and Schroon rivers. The unit is made up of almost 2 dozen non-contiguous parcels, covering 91,854 acres in area and has 204 miles of boundary line. The bulk of the unit is made up of a single parcel of approximately sixty thousand acres, located mainly within the town of Minerva. The remainder of the parcels range in size from a hundred acres to more than six thousand acres.

The planning area is bounded on the north by the High Peaks Wilderness Area (HPWA), on the east by Hoffman Notch Wilderness Area (HNWA) and Schroon Lake, on the south by State Route 8 and the Siamese Ponds Wilderness Area (SPWA), and on the west by the Hudson Gorge Primitive Area (HGPA) and the westerly Newcomb town line.

The Vanderwhacker Mountain Wild Forest also includes 6,110 acres of land which were gifted to the State for silvicultural research pursuant to ECL §9-0107(2). ECL §9-0105(1) provides the Department with jurisdiction over such lands.

Within the planning area, and not subject to this UMP, are privately-owned lands most of which are classified as "Resource Management" and "Rural Use" by the Adirondack Park Agency. Finch, Pruyn & Company, Inc. is the largest private landowner in the area. There are at least two large mine sites in the vicinity of the unit: Barton Mines near Gore Mountain and the National Lead (Kronos, Inc.) mines at Tahawus. There are also several private "rod & gun" clubs with small to moderate land holdings: Northwoods Club, Moose Pond Club, and Beaver Meadow Club to name a few. In addition, there are two children's summer camps on the shores of Balfour Lake, which use VMWF for education and recreation.

Also within the Planning Area are the Adirondack Mountain Reserve Easement (AMR), Samuel Bloomingdale Easement, and Upper Works Easement. They will not be addressed in this UMP, because these easements do not border VMWF state lands, but rather have trail connections with and border the HPWA and the Dix Mountain Wilderness Area (DMWA). Thus, the easements have a far greater impact on the management of these two Wilderness Areas, and management actions relative to the easements are addressed in the HPWA and DMWA UMP's.

[1]Throughout this text, the term "unit" will be used to describe the state-owned lands comprising the Vanderwhacker Mountain Wild Forest, whereas the phrase "planning area" will be used to refer to the public as well as private lands in the area.

B. Unit Geographic Area

The unit is covered by the following U.S.G.S. quadrangle maps:

7½' x 15' series	7½' x 7½' series
Blue Ridge	Chestertown
Dutton Mountain	North Creek
Mount Marcy	
Newcomb	
Santanoni Peak	
Schroon Lake	
Thirteenth Lake	

C. General Location

State Route 28N between Newcomb and Minerva runs generally north-south and divides the Vanderwhacker Mountain Wild Forest in half. It is the major road providing access to the unit. Other major roads providing access to the unit include: the Blue Ridge Road (or Boreas Road) which provides access to the northern portion of the unit; Hoffman Road (or Irishtown Road or Carl Hill Road) and Trout Brook Road (or Leonardsville Road), which provide access to parcels in the town of Schroon Lake and in the vicinity of Olmstedville; State Route 28, which provides access to parcels in the towns of Johnsburg and Indian Lake.

Several communities are either surrounded by or adjacent to the unit. These include the hamlets of Newcomb, Minerva, Olmstedville, Loch Muller, Irishtown, North Creek and North River.

The unit is in propinquity to several other Forest Preserve units including the High Peaks Wilderness Area to the north, the Dix Mountain Wilderness Area (DMWA) to the northeast, the Hoffman Notch Wilderness Area to the east, the Siamese Ponds Wilderness Area to the south, and the Hudson River Gorge Primitive Area to the west. The unit also borders several state-owned or state-run areas including Gore Mountain Ski Area, Lake Harris Campground, Eagle Point Campground, Scaroon Manor Campground, Camp Santanoni Historic Area, and the APA's Visitor Interpretive Center at Newcomb.

D. Acreage

Overall size of the unit is approximately **91,854** acres. The majority of the unit is comprised of a considerable portion of Townships 26 and 30, much of Thorn's Surveys of Township 25 and 27, portions of Bailey's and Dominick's Patents in Township 25, and a over a dozen lots in the eastern portion of Township 14.

Large non-contiguous parcels scattered around the main parcel include: an approximately 5,800 acre parcel directly adjacent to the HPWA encompassing the higher elevations of the North River Mountains; an approximately 5,000 acre parcel directly adjacent to the Camp Santanoni Historic Area (CSHA), some of which was historically part of the Santanoni Preserve; an approximately 2,400 acre parcel including Sand Pond Mountain adjacent to the HNWA, which was gifted to the state from Finch, Pruyn & Company, Inc. in the 1960's; a roughly 6,000 acre parcel in the Towns of Schroon and Minerva surrounding Bigsby, Oliver and Muller Ponds; an approximately 450 acre parcel in the Town of Schroon on the north end of Horseshoe Pond; a roughly 4,000 acre parcel in the Town of Schroon in the Alder Brook drainage; an approximately 4,000 acre parcel directly adjacent to Gore Mountain Intensive Use Area.

Smaller non-contiguous parcels are located in:
Hoffman Township
- portions of Lots 35 and 36
- southeast corner of Lot 38
- portions of Lots 86 through 90

Township 12
- small portions of Lots 134, 135, and 142

Township 14
- Lot 56 of Pond's Survey

Township 24
- Lot 25

Township 25
- the majority of Lot 22 of Bailey's Patent
- western half of Lot 37 of Bailey's Patent
- the southern half of Lot 46 of Dominick's Patent

Township 27
- Lot 41 of Thorn's Survey

The town by town and county by county breakdown of VMWF acreage is as follows:

County/Town		**Acreage**
Essex County (85,542)		
	Minerva	51,010
	Newcomb	18,651
	North Hudson	8,383
	Schroon	7,498
Warren County (6,096)		
	Johnsburg	4,915
	Chester	1,181
Hamilton County (216)		
	Indian Lake	216

E. Unclassified Parcels

The APA is required by law to assign a classification (i.e., "Wilderness", "Wild Forest", etc.) to state lands within the Adirondack Park. This occurs periodically as lands are acquired and usually results in relatively small areas that may remain unclassified for a short time following acquisition. There are currently two unclassified parcels within the Vanderwhacker Mountain Wild Forest planning area. One is located in the Town of Minerva on the shores of Balfour Lake. It is a 53-acre parcel that was purchased in 2000. The parcel abuts VMWF land and it is expected that it will be classified as "Wild Forest." In anticipation of its ultimate classification to "Wild Forest", the structures that were located on it have been removed. This UMP proposes construction of a hand carry canoe launch on this property. An easement for public travel by foot across private property at the north end of Balfour Lake exists so that the public may access that portion of this recently purchased property on the west side of the lake.

The second unclasssified parcel is located within the Town of Johnsburg on the right bank of the Hudson River (T&C Township 24, portions of Lots 22 and 23). It is an approximately 80-acre parcel, acquired in 2003. This parcel does not border any other state land.

The time frame for the classification procedure is not firm, but it is likely the above classifications will be complete within the next two years.

F. General Access

In addition to the roads listed in section C. above, there are several other roads that provide access to the unit for the automobile-traveling public. These include Moose Pond Road, Northwoods Club Road, Fourteenth Road, John Brannon Road, Hewitt Road, and Cheney Pond Road in the Town of Minerva, Horseshoe Pond Road, Beech Hill Road, Charley Hill Road, Thilo Road, and Charley Hollow Road in the town of Schroon Lake, State Route 9 and Old Schroon Road in the town of Chester, Barton Mines Road in the town of Johnsburg, and the beginning of Newcomb Lake Road in the town of Newcomb. Many, but not all of the above are town and county roads. A detailed location description of these roads will not be included here, as they are more easily located using the accompanying map, as well as Essex County and Warren County highway maps.

Vanderwhacker Mountain Wild Forest can also be accessed via the Hudson River, the Boreas River, and several small lakes and ponds including: Harris Lake, Balfour Lake, Bullet Pond, Hewitt Pond, Bigsby Pond, and Oliver Pond.

Approximately 70 million people live within a day's drive of the unit. Nearby population centers include the city of Glens Falls (45 miles), the city of Plattsburgh (65 miles), the urban areas of the Capitol District (90 miles), Montreal (120 miles), and New York City (230 miles).

G. History

The area around Vanderwhacker Mountain Wild Forest is rich with history, which in the interest of brevity cannot be discussed here. Only some incidents that relate directly to the development of the unit will be presented here, and in a much abbreviated fashion. For an in-depth look into the local history, the reader is referred to several useful sources, including a 1967 publication by the Minerva Historical Society, Watson's 1869 History of Essex County, Smith's 1885 History of Essex County, and others listed in the bibliography of this document.

Place Names

Vanderwhacker Mountain Wild Forest is obviously named after the mountain at its heart, but it is no longer clear for whom the peak was originally named. Some believe it was named after an old-time pioneer, who lived at the base of its northern slopes, perhaps along the Old Military Road or in the area of the Vanderwhacker snowmobile trail (currently closed). It is also quite possible that the mountain's name is derived from a corruption of the local surnames Vanderwarker and/or Vanderwalker, especially since there is some confusion as to the proper spelling. The mountain appears on most modern maps as "Vanderwacker" or "Vanderwhacker." It is quite possible that early mapmakers mistook the second "r" in "Vanderwarker" for a "c." It is not known for sure how the "h" may have entered the spelling, although it may have been due to Verplanck Colvin's spelling in his survey notes as "VanDeWhacker." Incidentally, this is how it also appears on many maps from the late 19th century.

Much of the derivation of the names of other geographical features of the unit is even less clear. Many features are probably named after local individuals and families as hinted at through old census records and maps, but direct evidence is hard to come by. Examples of such features include Merrill's Hill, Snyder Hill, Bigsby Pond, Oliver Pond, Muller Pond, Kellogg Mountain, and Kay's Hill. Conversely, the derivation of the names of a number of features in and around the unit is somewhat clearer and is listed below:

1. Moxham Mountain, Moxham Pond - named after Robert Moxham, who surveyed Dominick's Patent in 1798, and supposedly fell from the cliffs and died. The mountain was originally named Jones Mountain after another surveyor of the time. Verplanck Colvin refers to the mountain as Maxham, which might explain why the highest peak appears on modern maps as Maxam.
2. Roosevelt Hill - on the Newcomb-Minerva town line, may have been named to commemorate Theodore Roosevelt's midnight flight from Tahawus to North Creek following the assassination of President McKinley. The story goes that McKinley died at about the same time Roosevelt passed this hill.
3. Rist Mountain - in the North River Mountains, is named for Ernest Rist, Newcomb Town Supervisor from 1941 to 1959. The North River Mountains probably derive their name from the fact that they are visible from the upper Hudson River, which has also been referred to as the North River over the years.
4. Hewitt Pond, Hewitt Eddy – Sheldon B. Hewitt, a well-known guide, lived in a cabin on the west shore of the pond in the mid-1800's.
5. Burroughs Cave - named for John Burroughs, renowned naturalist and author of *Wake-Robin*, who visited the cave on a trip to the Adirondacks in 1863.
6. Cheney Pond - named for John Cheney, a local guide who lived in the Tahawus area in the mid-19th century. Some believe this was the pond at which he accidentally shot himself, although there are three locally that bear his name. Cheney Cobble in the North River Mountains is presumably named after him, as well.
7. Balfour Lake - used to be called Long Pond, but in April of 1835, John and Ellen Balfour moved to Minerva from Scotland and purchased 100 acres on the pond for $95. Coincidentally, the word "balfour" means "beautiful vale" in Scots, which might lead many to comment that it is an apt description of the watery depression.
8. Barnes Pond - might be named for the Barnes family of which Wesley Barnes, state assemblyman from Olmstedville, who championed the legislative bill that created the Forest Commission (which later became DEC) in 1885, was a member.

Logging History

In the mid-19th century, harvesting of mostly white pine, red spruce, and in some locales, hemlock occurred throughout the southern Adirondacks, and often took place on lands in close proximity to water courses, because the logs could be easily transported down rivers and streams. During this time period, softwoods were harvested from private lands that would later become part of VMWF in areas along the Hudson River, Boreas River, Minerva Stream, and Vanderwhacker Brook. Hardwoods were not generally harvested, because profitable markets did not exist for them at the time, and because they could not be transported as easily (they don't float as well as softwood logs). In fact, hardwoods were generally only harvested in the conversion of forests to farmlands and used to make charcoal and potash in order to subsidize that land clearing. Consequently, much of the lands that would later make up interior sections of VMWF remained relatively untouched by logging at that time. However, softwood logging continued over the latter half of the 19th century, and eventually reached most areas of VMWF before (or in between) State ownership. Laws of the time required the State to bid for lands at tax sale that had no other bidders. Prior to the creation of the Forest Preserve, the State would acquire such lands and later attempt to sell them. In between State ownership, these lands might be logged. This explains why many Forest Preserve lots were acquired by the State several times.

In some cases, even State ownership did not preclude harvesting of some State lots. Because of tax laws of the time, it was not uncommon for individuals to challenge the State's title to lands acquired through tax sales and win. This often resulted in further logging and then abandonment of these lots. After such abandonment the land would go up for bid at tax sale and would be re-purchased by the State. Many viewed the problematic tax law as a state subsidy for the logging industry. Several individuals, such as George Ostrander, P. J. Marsh, and George Underwood became masters at acquiring title to land the State thought it owned. In fact, land records of the time show that many VMWF lots in Townships 26 and 27 in the vicinity of Vanderwhacker Mountain were acquired from Ostrander, Marsh, and/or Underwood during the turn of the 19th and 20th centuries. It is quite likely that some of these lots were lost through title challenges and logged during this time.

The claim has been made by some that single-log river-driving originated in the Adirondacks, with the Hudson River being one of the well-known main routes. The Boreas River, which flows through the middle of the unit, served as a route initially for sawlogs and later for pulp bolts making their way to the Hudson and eventually to the softwood mills in Glens Falls. Reminders of this logging history are still evident on the unit in many places. For example, the old abutments of Brace Dam on the Boreas River north of the Blue Ridge Road are easily discernable. Similarly, Lester Dam, further south along the Boreas, was last used to transport logs to mill in 1949 and is even more conspicuous. In addition, many smaller bodies of water also show remnants of dams that may have been used in the early days of logging, such as Vanderwhacker Stillwater on Vanderwhacker Brook and Wolf Pond. The system of flush dams served to bring logs to the Hudson and on to Glens Falls in a journey that in some cases took two years to complete.

Fires often followed logging and as a result, portions of the Adirondacks were consumed by fire around the turn of the 19th and 20th centuries. Generally smaller fires occurred in VMWF, evidence of which can still be seen around Vanderwhacker Mountain as well as in the vicinity of the Blue Ridge Road. One of the later large scale fires occurred in the early 1930's in the North River Mountains, and probably helped lead to eventual state acquisition of 2,150 acres in that area in 1936.

Tanning Industry

Harvesting hemlock bark for the production of chemicals in the tanning of leather was an important industry in the area around VMWF in the mid-19th century. As a result, much of the accessible hemlock of VMWF was cut during this period, the logs being left in the woods to rot, and the bark sent to several tanneries in the immediate area, including Olmstedville, Pottersville, and Schroon Lake. In fact, the hamlet of Olmstedville gets its name from Sanford and Levi Olmstead, who built the Alpine Tannery there in 1840. The tannery, which burned down in 1867, was said to have consumed bark at five thousand cords per annum.

In 1869, Winslow Watson described the industry: "In the Towns of Schroon, Minerva, and North Hudson, this business is now the predominant and a highly important industrial pursuit. The vast hemlock forests, which spread over that region, afford an abundant and accessible material for those works."

Mining

The immediate area surrounding Vanderwhacker Mountain Wild Forest also has a rich mining history. Most of the mining has taken place on neighboring private land, though remnants of the industry's history may be found in a few places on VMWF.

Although not located on VMWF, the mining operation to have the most obvious impact on the unit has been the MacIntyre Mines at Tahawus. Originally, the mines concentrated on the production of iron ore. However, the ore was found to have copious quantities of an impurity, making iron extraction more costly. This impurity was later identified as titanium and became significant in the early 1940's as the US was drawn into World War II. In order to extend the D&H railroad tracks from the hamlet of North Creek to the titanium mines at Tahawus, the federal government appropriated VMWF land along the Boreas River and Vanderwhacker Brook and the railroad was constructed. Regular railroad service along these tracks has since been discontinued, but the tracks remain privately owned. This railroad route was not the first to be proposed through the unit in order to reach the Tahawus mines. Near the end of the 19th century, a route was proposed from Crown Point to parallel the Carthage Road (modern-day Blue Ridge Road) through parts of Township 30 near Wolf Pond and Vanderwhacker Pond. When Township 30 was sold to the state, an exception was made for the reservation of a 4-rod (66 ft.) right-of-way through certain lots for the construction of a railroad. However, plans for the railroad never got much further and it was never built.

There are two known sites on the unit where iron ore was mined. In the late 1860's, the Minerva Iron Company operated a mine on Green Mountain, also known as Orebed Mountain. Construction of a forge on nearby private land along Minerva Stream was begun soon after. The company may also have operated a mine in the northern reaches of the Town of Minerva; the exact location of which has since been forgotten. Nevertheless, perhaps due to poor quality of the ore of the region or mismanagement, the company folded in the late 1870's. Traces of the mine on Green Mountain are still evident and may have some historical significance.

Over the years, the mining of garnet has been a gainful industry in the southwestern edge of the planning area, though there are no known garnet mines on VMWF. However, building foundations and portions of an old road leading from the hamlet of North Creek to the garnet mines near Pete Gay Mountain still exist on the unit. It is said employees of the mine used the road to travel to work each day.

The only other known mining operations in the unit have been small gravel pits, often used in the construction of nearby roads. Examples of such pits can be seen along the Moose Pond Road near to where it crosses Vanderwhacker Brook and behind the ranger cabin on Route 28N.

General Acquisition History

Although state acquisition of the lands comprising Vanderwhacker Mountain Wild Forest has been ongoing from the 1870's up to the present, it occurred mainly in two distinct periods in time: the end of the 19th century and during the Great Depression. The majority of the lots that make up the main chunk of the unit, in the Towns of Newcomb and Minerva, was acquired by the state for back taxes in the late 19th and early 20th centuries. In addition, many of the state parcels in the rugged country around Moxham Mountain and in the vicinity of Snyder Hill and Oliver Hill, north of the hamlet of Olmstedville were acquired at the same time. A fair amount of land was also acquired in the same way in the Towns of Schroon and Chester in the area around Green, Pine, and Ledge Hills.

In 1901, the state acquired sole title to over 23,000 acres of land centered around Cheney Pond from George Finch of Finch, Pruyn & Company paper company. This acquisition represented the majority of Township 30 of Totten and Crossfield's Purchase, which stretches from Hewitt Pond north to the current VMWF boundary north of the Blue Ridge Road and from the Durgin Brook drainage west to the point where Route 28N enters VMWF from Newcomb. The eastern portion of the state lands in Township 30 is now classified as Hoffman Notch Wilderness Area and the rest as VMWF. The land was acquired through the settlement of litigation, apparently because of legal problems with the State's title to the land. Much of the Township had originally been acquired by the State in the Tax Sale years of 1877, 1881, and 1885. However, title was also held by George Finch, who claimed the lots had been offered at tax sale illegally and improperly. Litigation between Finch and the State ensued and resulted in a settlement in which Finch's underlying title was sold to the State for $1.50 an acre. In the settlement, George Finch reserved some rights and passed them on to Finch, Pruyn & Company, Inc. These reservations included: the right to dam waters and flood land throughout the Township in order to drive logs to the Hudson, a reservation to cut logs on certain lots in order to build and repair dams and build camps for purposes of river driving, a ten-year timber reservation on certain lots, and a right-of-way for an east-west railroad across the Township. Finch, Pruyn & Company, Inc. did exercise some of these rights over the years including cutting timber locally to maintain Lester Dam and continuing to use the Boreas River and lesser waterways in the Township for river driving.

In the litigation for Township 30, George Finch also negotiated several 25-year, 50-year, and lifetime leases to certain individuals then living along the Blue Ridge Road and the now Route 28N (Gregorie, LaBier, Provenchu, LeClaire, Kay, Havron). Extinguishing these leases would prove time consuming to the State in the 20's and 30's as occupants were reminded of the temporary nature of their rights. A few of them resulted in further settlements, which explain the existence of a few of the private inholdings in the township: specifically the old LaBier Farm on Blue Ridge Road and Kay's Place on 28N. (An interesting side note on the inholding on Lot 4, just south of Mud Pond: Prior to State acquisition through tax sale, George Finch purchased this Lot from Daniel Lynch, who excepted a 15-acre parcel along the road (now snowmobile trail) in the south east corner of the Lot from the sale).

Additional lands were acquired from timber companies and private citizens during the Great Depression as their use for the production of softwood pulpwood or for farming decreased, as did people's and companies' ability to pay property taxes. These lands included lots in the vicinity of Muller, Oliver, and Bigsby ponds as well as Thilo and Charley Hollow Roads in the Town of Schroon.

In the 1950's and 1960's, Finch, Pruyn & Company, Inc. gifted land to the state in several locations under a section of the Environmental Conservation Law (ECL § 9-0107(2)) that allowed the State to accept gifted lands to be used for "forestry purposes." The current version of this statute provides that such lands "shall not become a part of the Forest Preserve." Land in two of these locations would later become a part of the VMWF; one on the north end of Hoffman Notch and the other around the North River Mountains. The area of these non-Forest Preserve State lands totals approximately 6,100 acres.

Other smaller scattered parcels were added to VMWF over the years, but as has been mentioned above, the largest additions by far were made at the end of the 19th century and during the 1930's.

Assassination of President McKinley

Although this event did not have a direct effect on the unit, it is certainly one of the better known events in local history. On September 13, 1901, being warned that McKinley's condition was worsening after an assassination attempt, Vice President Theodore Roosevelt began his descent from a climb of Mount Marcy. The Vice President had been vacationing at Tahawus and decided to leave that night by stage along the rutted, dirt road that would later become State Highway 28N. The entire forty-mile trip to the railhead at North Creek took 5 hours, as he stopped at only two locations along the way, including Aiden Lair, for fresh horses. During the Vice President's mad flight from Tahawus, McKinley died. Upon arriving at Buffalo by train, Roosevelt was sworn in as President. A memorial plaque along the highway near Roosevelt Hill on the Newcomb-Minerva town line indicates Roosevelt's approximate location when McKinley expired.

Old Military Road or The Chester to Canton Road

In 1807, the New York State Legislature, spurred by the threat of war with Great Britain, passed an act laying out a so-called "Chester to Canton" road as a way to protect New Yorkers in the St. Lawrence valley. The concern was that if war arose, British troops garrisoned in Canada would invade St. Lawrence County. Getting munitions and reinforcements to the area from the eastern part of the State would be extremely time consuming. To prepare for this possibility, in 1809 construction was begun on an arsenal at Russell, 12 miles south of Canton and over several years it and the road were completed. There were few settlements between Russell and Minerva, so new construction was focused on this section. From Minerva, the route may have followed existing roads to Chester. The War of 1812 did not proceed as expected and so the road did not figure into the outcome. Portions of the road may have persisted for use by local traffic, but much of it fell into disuse and was reclaimed by the woods or disappeared in farming or logging operations.

The section of the road between the hamlets of Minerva and Newcomb, must have passed through present-day VMWF. Indeed, maps from the early 1900's show a road, which may have been the Old Military Road, heading northwest from the south end of Balfour Lake and crossing the Boreas River approximately 3 miles downstream from the current 28N bridge. The road is believed to have continued from this point around the east side of Vanderwhacker Mountain, perhaps eventually following the route of present-day Chaisson Road in the hamlet of Newcomb. To this day, it is possible to retrace much of this route as it winds through VMWF on a surprisingly level grade.

SECTION II. INVENTORY OF RESOURCES, FACILITIES, AND USE

A. Natural Resources

1. Physical

a. Geology

Much of the area is made up of sedimentary Precambrian rock of the Grenville formation. These sediments were laid down on the bottom of a sea that once covered a very large area of North America. The sediments occur throughout the Adirondacks and are also quite common in the provinces of Quebec and Ontario. Eventually, after continued accumulation, these sediments attained such depth and exerted such pressure that the bottom layers turned into rock such as sandstone, limestone, and shale. Around 1.1 billion years ago, a continent to the east collided with proto-North America with enough force to lift these rocks into a 5-mile high mountain range and recrystallize the sedimentary rock into metamorphic rock (Brown). Thus the sandstone became quartz, the limestone became marble, and the shale became gneiss. Igneous rock from magma from deep within the earth's crust also underwent metamorphosis to form granitic gneiss, olivine metagabbro, and metanorthosite. Metamorphosis of the gabbros resulted in localized occurrences of rock containing garnet (Fisher 1980). In addition, anorthosite underlies the entire Adirondack region and comes to the surface in the North River Mountains of VMWF and throughout the High Peaks region. Minor minerals in anorthosite include oxides of iron and titanium. As a result, over the years there have been a few mining operations in close proximity to and even within VMWF worth mentioning. These include the iron and titanium mine at Tahawus, several garnet mines including Hooper's and Barton's, and at least two iron mines on the unit within the town of Minerva that operated briefly in the 1870's.

The forces of wind and water slowly eroded this mountain range down to a level plain and the landscape remained unchanged for hundreds of millions of years. Then, as recently as 5 to 10 million years ago, a localized domical uplift began which created the present mountains. "The uplift established the present radial drainage pattern, which is overprinted on an earlier trellis pattern, controlled by the parallel, northeast-trending faults (Fisher, 1980)." The mountains largely to the north of VMWF (the area constituting the High Peaks) are the highest in the Adirondacks, because they were at the center of the domical uplifting and because they are composed of anorthosite, which resists erosion more than the metamophosed sedimentary rocks or gneisses that form the bedrock of most of VMWF. Consequently the highest peaks on the unit, the North River Mountains, are composed of anorthosite and are located in the northern reaches of VMWF. Additionally, the rocks less resistant to erosion are found mainly in lower elevations, such as the area around the hamlets of Minerva and Olmstedville and continuing down Trout Brook to its confluence with the Schroon River.

During the Ice Age, glaciers covered the entire area of VMWF, however glacial till or moraine only superficially covers valley floors and certain mountains. In a few places, glacial outwash dominates the local geography. For example, the hummocky plain of the North Branch of Wolf Creek drainage southeast of Newcomb was formed from glacial deposits. In addition, a great number of the ponds and lakes in the unit were formed when a preglacial valley was blocked by a morainal wall. Also, glacial erratics are common throughout the unit including at least one near the top of Vanderwhacker Mountain, indicating even its peak was completely covered by ice.

b. Soils

Most soils in VMWF are derived from glacial deposits that have been moved and deposited as glaciers advanced and retreated and are thus, quite different from the bedrock beneath them. These soils are divided into two broad categories: those derived from glacial till and those derived from glacial outwash, or eskers and moraines. Soils from glacial till are much more common on VMWF and somewhat richer than those from outwash. Organically derived soils make up a third, albeit less common soil type of VMWF.

The predominant soils on the unit are those in the Becket, Tunbridge, and Lyman series, comprising approximately 75% of soils on the unit and found mostly at the middle elevations. Becket series consists of very deep, well-drained loamy soils, formed in glacial till. Tunbridge series consists of moderately deep, well-drained soils, that formed in loamy glacial till. Lyman series consists of shallow, somewhat excessively drained soils formed in glacial till. Soils in the Becket, Tunbridge, and Lyman series are found in the vicinity of Muller, Oliver and Bigsby Ponds; in the area between the Lake Harris Campground and the Lower Duck Hole of Newcomb Lake; as well as around Moxham Mountain. Because soils in these three series are well-drained, they can be appropriate for trail development. Soils in these series are often bouldery, sometimes hindering bicycle and snowmobile trail layout. However, soil classifications are rarely the limiting factor in trail layout. Wetlands, topography, and scenery (among other things) generally dictate trail layout. Most proposed trail development in the unit is planned for areas in which these three series occur, partly because of their ubiquity.

The higher peaks in the unit, including the North River Mountains and Vanderwhacker Mountain, consist mainly of soils of the Rawsonville, Mundal, Hogback, and Ricker series. Rawsonville series consists of moderately deep, well-drained soils formed in loamy glacial till. Mundal series consists of moderately well-drained soils, formed in compact loamy glacial till. Soils in the vicinity of Stony Pond and the Sherman Ponds are also in the Mundal, and Rawsonville series. Hogback series consist of shallow, well-drained soils, formed in loamy glacial till, and are found in such places as the middle slopes of Vanderwhacker Mountain and the tops of Green and Balfour Mountains. Ricker series are organically derived soils that consist of very shallow and shallow, well-drained to excessively drained soils formed in thin organic deposits. Example locations are the summits of Vanderwhacker and Rist Mountains, as well as other peaks in the North River Mountains.

Some of the wetlands, such as Linsey Marsh, Moxham Pond and others in the vicinity of Minerva Stream consist of soils in the Loxley and Beseman series. Soils from these series are poorly drained, organically derived soils overlaying areas of glacial outwash. These soils series are not overly abundant on the unit.

Calcareous soils are found in several locations in VMWF, but are otherwise uncommon in the Adirondack region. Locations of these calcareous soils become apparent as one notes the unique plants and plant communities they often support. Examples include the occasional occurrence of white spruce, which is near the southern limit of its range in VMWF, and the northern white-cedar limestone woodland community around Harris Lake.

c. Terrain/Topography

Winslow Watson's apt description of Minerva in his 1869 History of Essex County also holds for much of the region surrounding the Town. He describes it, as "rugged and mountainous", "...containing about one-third mountain, one-third feasible land, and the residue rough and stony." A glance at a map reveals that the "one-third mountain" and the "rough and stony" third are now Forest Preserve, much of which comprises VMWF.

In general, the land in this locale rises from south southeast to north northwest from Warren County into Essex County. Elevation in VMWF ranges from around 700 feet (215 meters) on the parcels near Schroon Lake up to 3,878 feet (1,182 meters) at one of the peaks of the North River Mountains in the northern reaches of the unit. Rist Mountain (3,858 ft or 1,176 m), Cheney Cobble (3,684 ft or 1,123 m), Vanderwhacker Mountain (3,386 ft or 1032 m), and the north end of Washburn Ridge (3,054 ft or 931 m) are the only other points where the elevation rises above 3,000 feet on the unit. There are several other notable peaks on the unit that are easy to distinguish from others because of their size or shape including Sand Pond Mountain (2,940 ft or 896 m), Beaver Mountain (2,927 ft or 892 m), Green Mountain (2,799 ft or 853 m), and Moxham Mountain (2,464 ft or 751 m).

To the north, east and west of the hamlet of Minerva, the land rises quite quickly and is dotted with moderate sized hills and mountains, some of which have open ledges and cliffs as noted above. The parcels in the town of Schroon to the west of the hamlet are also located on relatively high ground, that being the first ground to be abandoned when farming no longer proves economically feasible. In addition, the parcels of VMWF in Warren County are located on the relatively high-ground around Gore Mountain.

d. Water

The VMWF lies within the Upper Hudson watershed. The Hudson River is adjacent to western and southern portions of the unit. The Boreas River, Minerva Stream and Trout Brook, all of which eventually drain into the Hudson, drain the central and eastern portions of the unit.

Ponded waters in and adjacent to the VMWF range in size from small beaver flows to 446-acre Newcomb Lake, which borders the northwest edge of the unit. The NYS Biological Survey lists 47 ponded waters within or bordering on the unit, but field checks determined that three of those waters are former beaver ponds that are now drained. Thus the unit involves 44 ponded waters with an estimated combined area of about 1400 acres.

Appendix B (page 125) lists the major ponded water in and bordering the unit with a brief narrative pertaining to their important features, including past and current management, accessibility, size, water chemistry, and fish species composition. Appendix B also gives statistical information about ponded waters including definitions of fisheries management classifications (See definitions on page 125) and depth.

Wild, Scenic, and Recreational Rivers (refer to Adirondack Park Land Use and Development Plan Map and State Land Map available from the Adirondack Park Agency)
Two rivers flow through parts of the Vanderwhacker Mountain Wild Forest that are protected by the NYS Wild, Scenic, and Recreational Rivers System Act (WSRR). Management of these sections is guided by ECL Article 15, Title 27 and Regulations for Administration and Management of the Wild, Scenic, and Recreational Rivers System in 6 NYCRR Part 666.

Boreas River - classified "scenic" for approximately 11.5 miles from Cheney Pond to the confluence with the Hudson. See ECL §15-2713 (2)©).

Hudson River - The portion from the hamlet of Newcomb to the confluence with the Cedar River is classified "scenic" and flows through or borders VMWF for approximately 1 mile. The portion stretching from the confluence with the Boreas River to just below the confluence with Griffin Brook is classified as "scenic." This portion flows through or borders VMWF for approximately 2.5 miles. See ECL §15-2713 (2)(f).

Hudson River - The portion from near the confluence with Raquette Brook and continuing south is classified "recreational." This portion flows through or borders VMWF for approximately 2.0 miles. See ECL §15-2714 (3)(k).

e. Wetlands

The wetlands of the VMWF possess great ecological, aesthetic, recreational, and educational value. In their capacity to receive, store, and slowly release rainwater and meltwater, wetlands protect water resources by stabilizing water flow and minimizing erosion and sedimentation. Many natural and man-made pollutants are removed from water entering wetland areas. Also, because they constitute one of the most productive habitats for fish and wildlife, wetlands afford abundant opportunities for fishing, hunting, trapping, and wildlife observation and photography. The wetlands of the unit serve as important habitats for a number of plant and wildlife species listed as endangered, threatened, or species of special concern which may be present in the unit, including the osprey, northern harrier, spruce grouse, wood turtle, Jefferson salamander, and blue-spotted salamander. (See discussion of Endangered, Threatened, Species of Special Concern on page 26). Historically, wetlands within and immediately adjacent to VMWF have be known to support one New York State-listed endangered plant (sparse-flowered sedge) and three New York State-listed threatened plants. (See discussion of Threatened, Rare, and Endangered Plants on page 22). For the visitor, expanses of open space wetlands provide a visual contrast to heavily forested settings.

Wetlands within VMWF have been inventoried and mapped, and are protected under the 1975 New York State Freshwater Wetlands Act by the Adirondack Park Agency. The most recent inventory from 2000 is available at the APA offices in Ray Brook, NY. In the Adirondack Park, wetlands of 1 acre or larger in size and including a buffer of 100 feet are regulated by the APA. Wetlands under an acre in size are also regulated if they border surface water. Federal regulations do not have a minimum size requirement , nor do they include a buffer distance.

There are approximately 6,172 acres of wetlands located in Vanderwhacker Mountain Wild Forest, occupying roughly 7% of the unit's overall area. (See map in Appendix B). The most common type are forested needle-leaved evergreen wetlands, which are those with a high percentage of mature balsam fir and spruce tree cover. Scrub/shrub broad-leaved deciduous wetlands, those where speckled alder, willow and other deciduous shrubs predominate, are also quite common. Both types are common to the wetlands of Wolf Creek and the Boreas River. Wetlands with cattails, sedges, and grasses (emergent persistent wetlands) are also common on the unit and obvious as one travels along Moose Pond Road. Wetlands consisting of young or stunted spruce and fir (scrub/shrub needle-leaved evergreen) or a variety of evergreen shrubs such as leatherleaf, sheep laurel, and/or Labrador tea also cover sizeable acreages of VMWF. There are smaller areas of wetlands dominated by hardwood trees, such as red maple (forested broad-leaved deciduous), and beaver activity has created wetlands of standing dead trees (forested dead). There are relatively few areas of tamarack bogs (forested needle-leaved deciduous and scrub/shrub needle-leaved deciduous) in the unit. The unconsolidated shore-sand type in the following table refers to small areas of the shore of Cheney Pond and Lester Flow on the Boreas River.

Some of the largest wetlands of the unit are associated with the main and north branches of Wolf Creek to the north, west, and south of Vanderwhacker Mountain. Other significant wetlands include those associated with the Boreas River, as well as Linsey Marsh, and wetlands associated with small ponds, such as Muller Pond, Grassy Pond, and numerous unnamed ponds. Of course significant wetlands complexes occur along many streams within the unit, including Vanderwhacker Brook, Minerva Stream,

Newcomb River, Deer Creek, and Little Vanderwhacker Brook, to name but a few. Beaver are attributed with altering the character of many wetlands along streams.

Wetland types are divided into the following categories and acreages (data from APA Cover Type Wetlands in the Upper Hudson project):

Wetland Type	**Area** (acres)	**% of Total Wetland Area**
Forested Needle-Leaved Evergreen	3,161.5	51.2
Scrub/Shrub Broad-Leaved Deciduous	1,074.4	17.4
Emergent Persistent	615.2	10.0
Scrub/Shrub Needle-Leaved Evergreen	562.7	9.1
Scrub/Shrub Broad-Leaved Evergreen	363.3	5.9
Forested Broad-Leaved Deciduous	224.6	3.6
Forested Dead	124.9	2.0
Forested Needle-Leaved Deciduous	30.7	0.5
Scrub/Shrub Needle-Leaved Deciduous	11.6	0.2
Unconsolidated Shore-Sand	1.4	0.02

f. Climate

Climate

Weather conditions affect public recreation and can be important in determining trail location, seasonal use trends, public uses, and management. The local climate of the VMWF area can be described as generally cool and moist. Climatic data exist for the hamlet of Newcomb on the outskirts of the unit, but information for interior portions of the unit is unavailable. Data for Newcomb are fairly representative of conditions on most of VMWF. Conditions on the easternmost parcels of VMWF in the vicinity of Schroon Lake will be generally warmer in winter months and have less snow cover. Of course, weather conditions will vary across the unit according to elevation, aspect, tree cover, distance from large bodies of water, and local wind patterns.

Data collected by SUNY ESF at their Huntington Forest property adjacent to VMWF near the Hamlet of Newcomb follows (1941 through 1994):
Average Yearly Precipitation (including snowfall) = 40"
Average Yearly Snowfall = 121"

Mean Monthly Temperature (Fahrenheit)

January	15°	April	39°	July	65°	October	44°
February	17°	May	51°	August	63°	November	32°
March	26°	June	60°	September	55°	December	19°

[mean of daily high and low temperature]
(data courtesy of Ray Masters, SUNY ESF Huntington Forest)

Blowdown

Winds have affected portions of VMWF in recent years causing areas of blowdown on a relatively small scale. In 1950, winds leveled stands throughout the Adirondacks from Fulton County to Franklin County. Much of VMWF escaped damage except for relatively small areas. According to maps drawn shortly after the event, blowdown was limited to higher elevations such as south facing slopes of Vanderwhacker Mountain, Beaver Mountain, and the North River Mountains. The area south of Lester Flow and small pockets on Green Mountain were also affected.

g. Air Resources and Atmospheric Deposition

Air quality in the region is good to excellent, rated Class II (moderately well controlled) by federal and state standards. The region receives weather flowing south from the Arctic Circle that tends to be cleaner than weather emanating from the west and southwest. Summit visibility is often obscured by haze caused by air pollutants when a large number of small diameter particles exist in the air. Air quality may be more affected by particulate matter blown in from outside pollution sources rather than from activities inside the Adirondack Park. The relative assimilation of outside pollutants, commonly referred to as “acid rain,” is under investigation and study by staff at the NYS Atmospheric Science Research Station located on Whiteface Mountain and other researchers.

According to recent results of lake chemistry monitoring by NYS DEC from 1992 through 1999, sulfates declined in 92 percent of a representative sample of lakes, selected by the Adirondack Lakes Survey Corporation (ALSC), but nitrates increased in 48 percent of those lakes. The decrease in sulfates is consistent with decreases in sulfur emissions and deposition, but the increase in nitrates is inconsistent with the stable levels of nitrogen emissions and deposition.

Continued monitoring by collection and analysis of acid deposition will allow the monitoring network to determine if improvements will continue as a result of reductions of SO2- and NO4- legislated in the 1990 Clean Air Act Amendments (CAAA).

Effects of Acidic Deposition on Forest Systems
At present, the mortality and decline of red spruce at high elevations in the Northeast and observed reductions in red spruce growth rates in the southern Appalachians are the only cases of significant forest damage in the United States for which there is strong scientific evidence that acid deposition is a primary cause (National Science and Technology Council Committee on Environment and Natural Resources, 1998). The following findings of the National Acid Precipitation Assessment Program (1998) provide a broad overview of the effects of acidic deposition on the forests of the Adirondacks.
The interaction of acid deposition with natural stress factors has adverse effects on certain forest ecosystems. These effects include:

- Increased mortality of red spruce in the mountains of the Northeast. This mortality is due in part to exposure to acid cloud water, which has reduced the cold tolerance of these red spruce, resulting in frequent winter injury and loss of foliage.
- Reduced growth and/or vitality of red spruce across the high-elevation portion of its range.
- Decreased supplies of certain nutrients in soils to levels at or below those required for healthy growth.

Nitrogen deposition, in addition to sulfur deposition, is now recognized as an important contributor to declining forest ecosystem health both at low and at higher elevations. Adverse effects occur through direct impacts via increased foliar susceptibility to winter damage, foliar leaching, leaching of soil nutrients, elevation of soil aluminum levels, and/or creation of nutrient imbalances. Excessive amounts of nitrogen cause negative impacts on soil chemistry similar to those caused by sulfur deposition in certain sensitive high-elevation ecosystems.

Sensitive receptors
High-elevation spruce-fir ecosystems in the eastern United States epitomize sensitive soil systems. Base cation stores are generally very low, and soils are near or past their capacity to retain more sulfur or nitrogen. Deposited sulfur and nitrogen, therefore, pass directly into soil water, which leaches soil aluminum and minimal amounts of calcium, magnesium, and other base cations out of the root zone. The low availability of these base cation nutrients, coupled with the high levels of aluminum that interfere with roots taking up these nutrients can result in plants not having sufficient nutrients to maintain good growth and health.

Sugar maple decline has been studied in the eastern United States since the 1950s. One of the recent studies suggests that the loss of crown vigor and incidence of tree death is related to the low supply of calcium and magnesium to soil and foliage (Driscoll 2002).

Exposure to acidic clouds and acid deposition has reduced the cold tolerance of red spruce in the Northeast, resulting in frequent winter injury. Repeated loss of foliage due to winter injury has caused crown deterioration and contributed to high levels of red spruce mortality in the Adirondack Mountains of New York, the Green Mountains of Vermont, and the White Mountains of New Hampshire.

Acid deposition has contributed to a regional decline in the availability of soil calcium and other base cations in high-elevation and mid-elevation spruce-fir forests of New York and New England and the

southern Appalachians. The high-elevation spruce-fir forests of the Adirondacks and Northern New England are identified together as one of the four areas nationwide with a sensitive ecosystem and subject to high deposition rates.

Bicknell's Thrush is present in high elevation forest thickets within the VMWF. It is a species of Special Concern in NYS, and a species of high conservation concern throughout the Northeast. Acid deposition can negatively effect Bicknell's Thrush through the effects on its preferred young forest habitat, and by reduction in slug and snail populations, which can provide an important source of calcium during egg laying.

Effects of Acidic Deposition on Hydrologic Systems
New York's Adirondack Park is one of the most sensitive areas in the United States affected by acidic deposition. The Park consists of over 6 million acres of forest, lakes, streams and mountains interspersed with dozens of small communities, and a large seasonal population fluctuation. However, due to its geography and geology, it is one of the most sensitive regions in the United States to acidic deposition and has been impacted to such an extent that significant native fish populations have been lost and signature high elevation forests have been damaged.

There are two types of acidification which affect lakes and streams. One is a year-round condition when a lake is acidic all year long, referred to as chronically or critically acidic. The other is seasonal or episodic acidification associated with spring melt and/or rain storm events. A lake is considered insensitive when it is not acidified during any time of the year. Lakes with acid-neutralizing capability (ANC) values below 0 μeq/L are considered to be chronically acidic. Lakes with ANC values between 0 and 50 μeq/L are considered susceptible to episodic acidification; ANC may decrease below 0 μeq/L during high-flow conditions in these lakes. Lakes with ANC values greater than 50 μeq/L are considered relatively insensitive to inputs of acidic deposition (Driscoll et al. 2001). Watersheds which experience episodic acidification are very common in the Adirondack region. A 1995 EPA Report to Congress estimated that 70% of the target population lakes are at risk of episodic acidification at least once during the year.

Monitoring
From 1992 through 1999, sulfates declined in a majority of selected lakes by the Adirondack Lake Survey Corporation, but nitrate patterns were less clear with a few lakes improving and most lakes not changing. The decrease in sulfates is consistent with decreases in sulfur emissions and deposition, but the nitrate pattern is not explained by the unchanged levels of nitrogen emissions and depositions of recent decades.

In addition to sensitive lakes, the Adirondack region includes thousands of miles of streams and rivers which are also sensitive to acidic deposition. While it is difficult to quantify the impact, it is certain is that there are large numbers of Adirondack brooks that will not support native Adirondack brook trout. Over half of these Adirondack streams and rivers may be acidic during spring snowmelt, when high aluminum concentrations and toxic water conditions adversely impact aquatic life.

In 1986, the ALSC surveyed a total of 14 waters in this unit (Appendix B - Barnes Pond, Big Sherman Pond, Cheney Pond, Hewitt Pond, Hotwater Pond, Little Rankin Pond, Nate Pond, Rankin Pond, Stony Pond, Vanderwhacker Pond, Harris Lake, Oliver Pond, Sand Pond, Wolf Pond). Summaries of those data can be found at (http://www.adirondacklakessurvey.org) see ALS Lake Data. Since that time the Adirondack Long-Term Monitoring (LTM) program managed by the ALSC has been sampling chemistry in 52 lakes across the Park on a monthly basis. One of these waters is located within the boundaries of

the VMWF unit; Nate Pond. Two other LTM waters are located in relatively close (within 10 miles) proximity to the northeast and northwest of VMWF. These include Arbutus Lake and Clear Pond. Annual summaries of 22 chemical parameters can be downloaded from the ALSC website.

2. Biological

a. Plant Life

The vegetation of the unit has been shaped over the years through the effects of wind, fire, logging, and settlement, and influenced by soils, elevation, aspect, hydrological regimes, and many other processes. In the late 1800's, much of the unit was extensively logged, lessening the softwood component of many stands in VMWF. The areas of settlement and agriculture were also much larger than they are today, as attested by the number of stone fences and old stone foundations throughout the unit. Beech bark disease has also had an effect throughout the unit over the recent years. The disease is initiated when the beech scale, *Cryptococcus fagisuga*, attacks the bark of beech trees and renders it susceptible to bark canker fungi, *Nectria coccinea* var. *faginata* (USDA Forest Service 1990). Many of the large diameter American beech (*Fagus grandifolia*) are killed, and mainly small root sprouts exist with scattered large diameter trees persisting. Areas where it is easily observable include the height of land between Hotwater Pond and Grassy Pond, but it is common throughout New York. Spruce decline, perhaps due to acid deposition, has affected portions of the unit, as well.

Forest cover type maps are not available at this time, but may be developed in the future. The list of most common forest types that follows has been developed mostly through staff observation. It has been supplemented with information from other Forest Preserve UMP's, USDA Forest Service publications, and the Natural Heritage Program's "Ecological Communities of NYS."

Lowland Coniferous Forest - This type is quite common and typical of low lying areas of VMWF, where soils are generally high in moisture content and exhibit poor drainage. It is often composed of balsam fir (*Abies balsamea*) and red spruce (*Picea rubra*) and occasionally has an eastern white pine (*Pinus strobus*) component. Infrequent associated species include northern white-cedar (*Thuja occidentalis*), black spruce (*Picea mariana)*, and tamarack (*Larix laricina*). Often tree canopy is very dense and subsequently the herbaceous layer is quite sparse. This forest type is very common in the wetlands of the north branch of Wolf Creek and along the banks of the Boreas River, which was named for the "boreal" look of the vegetation along its banks.

Mixed Coniferous and Deciduous Forest - This type is generally composed of northern hardwoods with a major red spruce and/or balsam fir component and may infrequently contain a white spruce (*Picea glauca*) component. White spruce occurrence may be due, in part, to abundant calcium supply (USDA FS). It usually occurs at elevations above spruce-fir swamps and eventually grades into northern hardwoods above. Examples of the cover type occur on the uplands between Hotwater Pond and Grassy Pond, as well as on the middle slopes of Green Mountain. There are also areas where white pine can be a major component.

Northern Hardwood Forest - This type is the most common throughout the unit and usually consists of sugar maple (*Acer saccharum*), American beech, and yellow birch (*Betula alleghaniensis*). Other associated tree species may include northern red oak (*Quercus rubra*) on warmer and drier sites, eastern hemlock (*Tsuga canadensis*), black cherry (*Prunus serotina*), white ash (*Fraxinus americana*), red maple (*Acer rubrum*), and less frequently American basswood (*Tilia americana*). Characteristic understorey vegetation includes hobblebush (*Viburnum lantanoides*), striped maple (*Acer*

pennsylvanicum), and overstorey tree saplings. This type is normally found at elevations up to 2,500 feet on moderately well-drained sites. Examples of this type can be seen at "Boreas Hardwoods" to the north of Northwoods Club Road just east of the Boreas River and on the lower slopes of Dutton Mountain. In steep ravines, hemlock can be the major tree species, such as in the lower reaches of the Raymond Brook drainage in the town of Johnsburg.

Mountain Spruce-Fir Forest - This type generally occurs at elevations above 2,500 feet. It is composed of mainly red spruce and balsam fir often in association with yellow birch. Mountain-ash (*Sorbus americana*) is often a sparse associate. This type occurs at only a few locations on VMWF. The most accessible example can be seen along the last half-mile of the tower trail on Vanderwhacker Mountain. It may also occur in the higher elevations of the North River Mountains.

Successional Forests - This type is common to burned-over areas, old openings and more recently abandoned areas on the unit. This type can vary considerably, but is often made up of one or more of the following species: quaking aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), white pine, black cherry, and white ash. Examples of this type can be seen along roadsides and on parcels near the hamlet of Minerva. Stands of pure white pine also occur in some locations and are generally indicative of areas of fire or blowdown.

Plantation - Although not necessarily natural in character, plantations are present in several locations on the unit. Many of these were planted on abandoned farmland and burned over areas in the '30s by the Civilian Conservation Corps (CCC) and may be made up of one or more species of softwoods, including eastern white pine, Norway spruce (*Picea abies*), and Scots pine (*Pinus sylvestris*). Examples of white pine plantations can be seen in the saddle along Charley Hollow Road, between the Town of Schroon and the hamlet of Olmstedville. Norway spruce plantations can be seen behind the old ranger cabin on Route 28N near the Minerva-Newcomb town line, along the Roosevelt truck trail near Kay's camp, along the northern portion of the Cheney Pond-Irishtown snowmobile trail, and on the flats between the Blue Ridge Road and Wolf Pond, as well as many other sites within the unit. Small areas of Scots pine exist in a few places in the unit, including along the D & H railroad tracks north of 28N near Vanderwhacker Brook.

Other - Other forest types occur on the unit but occupy relatively small areas. Limestone woodlands exist in the vicinity of Lake Harris and will be discussed in greater detail in the "Rare Ecological Communities" subheading of the "Inventory of Resources, Facilities, and Use" section on page 34. The New York Natural Heritage Program has also identified a Maple-Basswood Rich Mesic Forest on the unit. This forest type is common in the western and central portions of the state, but less common to the Adirondacks. Pure stands of red pine (*Pinus resinosa*) are rare to VMWF, but at least one exists on the unit on the steep, dry, western slopes of Dutton Mountain (personal observation, M. Curley).

Forest Cover Type Inventory

The Bureau of Forest Preserve Management and SUNY ESF are working together to develop computerized GIS models of areas of the Adirondack Forest Preserve. The project will assemble a comprehensive repository of existing spatial data into a GIS database to facilitate the inventory portion of the Unit Management Plan process in the Adirondack Park. The intent of the project is to support the planning process, and increase the quantity and improve the quality of inventory data included in plans. This will be accomplished by increasing cooperation of planners and technical experts among universities, state agencies and non-government organizations to facilitate inclusion of natural resource inventory data in Unit Management Plans. Through this project, Forest Cover Type maps will be developed for this unit for the next update of the UMP.

Invasive-Exotic Plants

Nonnative, invasive species directly threaten biological diversity and the high quality natural areas in the Adirondack Park. Invasive plant species can alter native plant assemblages, often forming monospecific stands of very low quality forage for native wildlife, and drastically impacting the ecological functions and services of natural systems. Not yet predominant across the Park, invasive plants have the potential to spread - undermining the ecological, recreational, and economic value of the Park's natural resources.

Because of the Adirondack Park's continuous forested nature and isolation from the normal "commerce" found in other parts of the State, its systems are largely functionally intact. In fact, there is no better opportunity in the global temperate forested ecosystem to forestall and possibly prevent the alteration of natural habitats by invasive plant species.

Prevention of nonnative plant invasions, Early Detection/Rapid Response (ED/RR) of existing infestations, and monitoring are primary objectives in a national strategy for invasive plant management and necessitates a well-coordinated, area-wide approach. A unique opportunity exists in the Adirondacks to work proactively and collaboratively to detect, contain, or eradicate infestations of invasive plants before they become well established, and to prevent further importation and distribution of invasive species, thus maintaining a high quality natural landscape. We share an inherent obligation to minimize or abate existing threats in order to prevent widespread and costly infestations.

The Department has entered into a partnership agreement with the Adirondack Park Invasive Plant Program (APIPP) The mission of the APIPP is to document invasive plant distributions and to advance measures to protect and restore native ecosystems in the Park through partnerships with Adirondack residents and institutions. Partner organizations operating under a Memorandum of Understanding are the Adirondack Nature Conservancy, Department of Environmental Conservation, Adirondack Park Agency, Department of Transportation, and Invasive Plant Council of NYS. The APIPP summarizes known distributions of invasive plants in the Adirondack Park and provides this information to residents and professionals alike. Specific products include a geographic database for invasive plant species distribution; a central internet website for invasive plant species information and distribution maps; a list-serve discussion group to promote community organization and communication regarding invasive species issues; and a compendium of educational materials and best management practices for management.

In 1998 the Adirondack Nature Conservancy's Invasive Plant Project initiated Early Detection/Rapid Response (ED/RR) surveys along Adirondack Park roadsides. Expert and trained volunteers reported 412 observations of 10 plant species throughout the area surveyed, namely NYS DOT Right-of-Ways (ROW). In 1999 the Invasive Plant Project was expanded to include surveying back roads and the "backcountry" (undeveloped areas away from roads) to identify the presence or absence of 15 invasive plant species. Both surveys were conducted under the auspices of the Invasive Plant Council of New York "Top Twenty List" of non-native plants likely to become invasive within New York State. A continuum of ED/RR surveys now exists under the guidance of the Adirondack Park Invasive Plant Program (APIPP).

Assessments from these initial ED/RR surveys determined that four (4) terrestrial plant species would be targeted for Control and Management based upon specific criteria such as geophysical setting, abundance and distribution, multiple transport vectors and the likelihood of human-influenced disturbance. The four Priority terrestrial invasive plants species are **Purple loosestrife** (*Lythrum salicaria*), **Common reed** (*Phragmites australis*), **Japanese knotweed** (*Polygonum cuspidatum*) and **Garlic mustard** (*Alliaria petiolata*).

The Adirondack Park is susceptible to further infestation by invasive plant species intentionally or accidentally introduced to this ecoregion. While many of these species are not currently designated a priority species by APIPP, they may become established within or in proximity to a Unit and require resources to manage, monitor, and restore the site.

Infestations located within and in proximity to a Unit may expand and spread to uninfected areas and threaten natural resources within a Unit; therefore it is critical to identify infestations located both within and in proximity to a Unit and then assess high risk areas and prioritize Early Detection Rapid Response (ED/RR) and management efforts.

Terrestrial Locations

There are no known **Purple loosestrife** (*Lythrum salicaria*) infestations on VMWF lands, but three (3) infestations exist on private and state lands in the general vicinity of this unit. Please refer to the terrestrial invasive plant species distribution map (Appendix R).

There is one (1) **Japanese knotweed** (*Polygonum cuspidatum*) infestation within the unit and two (2) additional infestations in the general vicinity of the unit. Multiple, high priority Japanese knotweed infestations occur along both sides of North Woods Club Road near the VMWF boundary. These aggressive infestations are spreading within and beyond the maintained ROW and into adjacent Forest Preserve. The plants were likely accidentally introduced via contaminated fill/spoils utilized along the Town roadsides. The infestations are interspersed for approximately 275 feet.

A confined, dense, **High Priority** Japanese knotweed infestation occurs at Camp Santanoni, near the old Sears camp. Previous efforts by DEC staff to control the infestation by weed-whipping have accidentally spread and intensified the stand density.

There is one (1) **Common reed** (*Phragmites australis*) infestation in the general vicinity of the unit.

Observances of New Non-Native Invasive Plant Species

There are multiple **Yellow iris** (*Iris pseudacorus*) infestations within the Siamese Ponds Wilderness that may impact the Vanderwhacker Mountain Wild Forest**.** Multiple infestations of a terrestrial invasive species of critical concern, **Yellow iris** (*Iris pseudacorus*), occurs within the Vly Pond outlet and headwaters of the East Branch Sacandaga River. Multiple Yellow iris infestations also occur within a tailings pond on Barton Mines property. This tailings pond has an outlet into the Vly Pond outlet and is likely serving as a nursery infestation to the Siamese Ponds Wilderness. The geophysical settings of these Yellow iris infestations make them imminent threats to both Vanderwhacker Mountain Wild Forest and Siamese Ponds Wilderness. Recommendations for the eradication of this infestation are contained within the Siamese Ponds Wilderness UMP.

While **Yellow iris** is not currently designated a priority terrestrial invasive plant species by APIPP, these documented infestations affecting both Units are the largest known occurrences of this invasive species within the Adirondack Park. The species' historical record of difficulty to control, and potential domination of stream corridors and wetlands, makes it a species of critical concern for all land managers within the Adirondack Park. Containment and eradication of this species will be considered a high priority by the Department.

Aquatic Invasive Plant Locations

A variety of monitoring programs collect information directly or indirectly about the distribution of aquatic invasive plants in the Adirondack Park including the NYS DEC, Darrin Fresh Water Institute, Paul Smiths College Watershed Institute, lake associations, and lake managers. In 2001, the Adirondack Park Invasive Plant Program (APIPP) compiled existing information about the distribution of aquatic invasive

plant species in the Adirondack Park and instituted a regional long-term volunteer monitoring program. APIPP trained volunteers in plant identification and reporting techniques to monitor Adirondack waters for the presence of aquatic invasive plant species. APIPP coordinates information exchange among all of the monitoring programs and maintains a database on the current documented distribution of aquatic invasive plants in the Adirondack Park.

Aquatic invasive plant species documented in the Adirondack Park are Eurasian watermilfoil (*Myriophyllum spicatum*), Water chestnut (*Trapa natans*), Curlyleaf pondweed (*Potamogeton crispus*), Fanwort (*Cabomba caroliniana*), European frog-bit (*Hydrocharus morsus-ranae*), and Yellow floating-heart (*Nymphoides peltata*). Species located in the Park that are monitored for potential invasibility include Variable-leaf milfoil (*Myriophyllum heterophyllum*), Southern naiad (*Najas guadalupensis*), and Brittle Naiad (*Najas minor*). Additional species of concern in New York State but not yet detected in the Park are Hydrilla (*Hydrilla verticillata*), Water hyacinth (*Eichhornia crassipes*), and Brazilian elodea (*Egeria densa*). For species specific information regarding natural history, ecology, and reproduction, please refer to the Invasive Plant Atlas of New England program website http://webapps.lib.uconn.edu/ipane/search.cfm.

Initial surveys do not detect occurrences of aquatic invasive plants within the VMWF. APIPP volunteers monitored Minerva Lake in 2004 and Austin Pond from 2002-2004, and no aquatic invasive plant infestations are documented to-date. The APIPP Park-wide volunteer monitoring program aims to maintain its monitoring program on these and other lakes.

Threatened, Rare, and Endangered Plants

Over the years, the New York Natural Heritage Program (NYNHP) has identified the historical existence of one New York State-listed endangered plant and three New York State-listed threatened plants within or immediately adjacent to VMWF. Although the specific location of these species is exempted from public Freedom of Information Laws (FOIL) to protect the species, this information is used and integrated by DEC in all resource planning activities. The sparse-flowered sedge (*Carex tenuiflora*), last observed in 1923, was noted to have occurred near open marsh in Newcomb, generally located on the VMWF parcel adjacent to Camp Santanoni. It is classified as endangered with a global rank of G5 and a state rank of S1 (for explanation, see Appendix D, page 146). Swamp pink (*Arethusa bulbosa*), classified as threatened was last observed in 1923 in a marsh in Newcomb, generally located on the VMWF parcel adjacent to Camp Santanoni. Its global rank is G4, and state rank is S2. Balsam willow (*Salix pyrifolia*), classified as threatened, was last observed in 1927 along banks of the Hudson River in the Town of Newcomb. Its global rank is G5 and state rank is S2S3. Pink wintergreen (*Pyrola asarifolia* ssp *asarifolia*), listed as threatened, was last observed in 1925 along the banks of the Hudson River above Newcomb, and in 1939 in a spruce-tamarack swamp in Newcomb. Its global rank is G5 and state rank is S2. Since all of four of these plants have not been observed on the unit since the 1930's, it is recommended that NYNHP perform a survey of these areas to determine if these plants are present and what measures, if any, should be taken to protect them. A fifth plant, tall thistle (*Cersium altissimum*), which possesses no state or federal protective classification, was last observed in 1927 in a sandy field along Minerva Stream adjacent to VMWF. Tall thistle is now thought to be extirpated from New York State, with a very low probability of rediscovery. Its global rank is G5. There are no other threatened, rare, or endangered plants known to exist on the unit.

b. Wildlife

Field inventories of wildlife species have not focused specifically on VMWF. However, various inventories, surveys and monitoring projects undertaken by DEC and others have included VMWF in their

scope. The species included in the attached appendices were compiled by combining the results of various surveys, harvest statistics, publications, and the reports of observers.

Birds

As a result of the unit's transitional character in terms of climate and vegetation, there is an overlapping of typically northern, eastern and southern bird species. The distribution and abundance of bird species, as with wildlife in general, is determined by physical factors such as elevation, topography, climate, various biological factors such as forest types, population dynamics, each species' habitat requirements, forest preserve regulations and social land uses. The avian community varies seasonally. Some species remain within the area all year round, but the majority of species utilize the area during the breeding season and for migration.

According to New York State Breeding Bird Atlas data (BBA) (2000), 147 species of birds are believed to breed within the VMWF (Appendix E, Table 1). Atlas blocks overlap and extend beyond the state land boundary. Therefore, BBA data does not necessarily reflect what is found on Vanderwhacker Mountain Wild Forest but on the atlas blocks. It is probable that some species determined to be present by BBA were found only on private lands adjacent to the state lands. Still the BBA data should provide a very good portrayal of the species found throughout the Vanderwhacker Mountain Wild Forest. Some species thought to occur occasionally within the unit are not shown in the Bird Atlas data.

The Vanderwhacker Mountain Wild Forest is comprised of a variety of habitats, but is predominantly maturing forest. Over time, the forest will mature into old growth forest and the bird species utilizing the area will be dominated by species that utilize that habitat type. Other habitats types of importance include lakes, ponds, streams, bogs, beaver meadows, and shrub swamps.

Birds associated with marshes, ponds, lakes, and streams include: common loon, great blue heron, green-backed heron, American bittern, and a variety of waterfowl. The most common ducks include the mallard, American black duck, wood duck, hooded merganser, and common merganser. Other species of waterfowl migrate through the region following the Atlantic Flyway.

Bogs, beaver meadows, shrub swamps, and any areas of natural disturbance provide important habitat for species that require or prefer openings and early successional habitats. Species such as alder and olive-sided flycatchers, American woodcock, ruffed grouse, Lincoln sparrow, Nashville warbler, chestnut-sided warbler, Canada warbler, golden-winged warbler, mourning warbler, eastern towhee, brown thrasher, yellow warbler, common yellowthroat, indigo bunting, whip-poor-will, and field sparrow rely on these habitats and are rarely found in mature forests. These species, as a suite, are declining more rapidly throughout the Northeast than species that utilize more mature forest habitat. Due to existing landcover and patterns of vegetative succession, habitat for these species will be very limited within Vanderwhacker Mountain Wild Forest, and we expect that early successional species will decline in the absence of disturbance that creates openings.

Birds that prefer forest habitat are numerous, including many neotropical migrants. These species have adapted to habitats with varying forest conditions. Some prefer large blocks of contiguous forest (e.g., northern goshawk), others prefer blocks of forest with adjacent openings, and many prefer forest with an relatively thick shrub layer. The forest currently is maturing, and will eventually become old growth forest dominated by large trees. However, through processes of natural disturbance, gaps in the forest canopy will allow sunlight to reach the ground and will create areas of dense regrowth.
Songbirds are a diverse group filling different niches in the Adirondacks. The most common species found throughout the deciduous or mixed forest include the ovenbird, red-eyed vireo, black-capped chickadee, blue jay, downy woodpecker, brown creeper, wood thrush, black-throated blue warbler,

magnolia warbler, American redstart, white-throated sparrow, pileated woodpecker, and black and white warbler. The golden-crowned kinglet, purple finch, red and white-winged crossbill, gray jay, boreal chickadee, black-throated green warbler, northern parula, and black-backed woodpecker are additional species found in the coniferous forest and exhibit preference for this habitat. Birds of prey common to the area include the barred owl, great horned owl, sharp-shinned hawk, and broad-winged hawk.

Game birds include upland species such as turkey, ruffed grouse and woodcock, as well as a variety of waterfowl. Ruffed grouse and woodcock prefer early successional habitats and their habitat within the area is limited due to the lack of timber harvesting. Turkey are present in low numbers and provide some hunting opportunities. Waterfowl are fairly common along the waterways and marshes, providing hunting opportunities.

Bird Conservation Areas

In September of 1997, §11-2001 of the Environmental Conservation Law of New York was established creating the New York State Bird Conservation Area Program. The program is designed to safeguard and enhance bird populations and their habitats on selected state lands and waters. In November of 2001, New York State designated the Adirondack mountain summits above 2,800 feet in Essex, Franklin, and Hamilton counties as the Adirondack Subalpine Forest Bird Conservation Area (BCA). Included in the designation were lands over 2,800 feet elevation in the VMWF. The site was nominated because of its diverse species concentration, individual species concentration and its importance to species at risk, in particular the Bicknell's Thrush (special concern). The vision for the Adirondack Subalpine Forest BCA is to "continue to maintain the wilderness quality of the area, while facilitating recreational opportunities in a manner consistent with conservation of the unique bird species present" (NYSDEC, 2001). The Department has developed Management Guidance Summary to identify education and research needs, and to outline operational management considerations. Considerations specific to the unit include:

Operation and Management Considerations:

- The BCA is comprised of lands that are within the VMWF and other lands within the broader Adirondack Forest Preserve. The High Peaks Wilderness Area portion is subject to relatively stringent regulations and use limitations. Portions of the BCA that are not within the HPWA may have less stringent use limitations.
- To ensure disturbances are kept to a minimum, trail maintenance and construction activities should be accomplished outside of the breeding season, when possible. If, in accordance with Department policy, motorized equipment use is necessary, such use shall be minimized during the breeding or nesting periods.

Education, Outreach and Research Considerations:

- There is a need to identify to the public the distinctive bird community present in subalpine forests over 2,800 feet. The potential impacts of human intrusion need to be portrayed to the public, and a "please stay on the trails" approach may be beneficial. Continue partnerships with the National Audubon Society, High Peaks Audubon Society, Adirondack Mountain Club and other groups involved in education and conservation of birds of the Adirondack Sub-alpine Forest BCA.
- Acid rain deposition may be having an impact on nesting success of songbirds at high elevations by causing die-offs of high altitude conifer forests, and killing snails and other sources of calcium needed for egg production. More research is needed on this. The curtailment of sulphur dioxide emissions and the reduction of acid rain is currently a significant New York State initiative.
- A detailed inventory and standardized monitoring of special concern species is needed for the area. In particular, all peaks above 2,800 feet should be surveyed for Bicknell's Thrush.
- The impact of the current levels of human-use on nesting success needs to be assessed.

Mammals

Other than the small-footed bat (*Myotis leibii*), there are no known endangered, threatened, or mammals of special concern that inhabit the VMWF despite the occasional reports of wolves and cougars.

Larger mammals known to inhabit the VMWF include white-tailed deer, moose, black bear, coyote, bobcat, raccoon, red fox, gray fox, fisher, marten, mink, muskrat, river otter, beaver, porcupine, and varying hare.

A variety of smaller mammals also reside in the unit. (See Appendix E, Table 7). They include various species of bats, shrews, moles, and mice, along with the ermine, long-tailed weasel, eastern chipmunk, and red squirrel. Populations of weasel, mink, muskrat, otter, and beaver are concentrated near water, and the varying hare and red squirrel are mostly confined to stands of spruce and fir. Although suitable habitats exist for the continued survival of all species presently occurring in VMWF, the process of forest succession influenced by natural disturbances such as wind, insects, and disease, as well as past logging and forest fires, continues to alter the composition of forest communities. Large areas are presently occupied by young forest stands which became established after disturbance. The current decline in upper-elevation stands of spruce and fir, and the widespread die back of beech, caused by the spread of the beech bark disease, continually creates openings in the forest canopy of the unit. Forest succession is not static and consequently, locally restores habitat conditions favorable to many wildlife species.

Populations of varying hare at higher elevations may increase as young stands of spruce and fir grow beneath older stands of white birch and northern hardwoods. However, the maturation of climax forest communities may lead to reductions in hare and deer populations. On the other hand, the populations of various species of birds and mammals which require tree cavities for reproduction should increase as forest stands mature.

White-tailed deer are found throughout VMWF. However, habitat conditions of the unit make it a relatively poor area for deer production as compared to other areas in northern New York. The size of the deer population is limited by severe winters, insufficient deer browse, and few suitable deer wintering areas. From early spring (April) to late fall (November), deer are distributed generally on their "summer range." When snow accumulates to depths of 20 inches or more, deer travel to traditional wintering areas. Locations of deer wintering areas are described in more detail within the significant habitat section (page 30.) Deer wintering areas usually are lowland areas covered by forests of spruce and fir which serve as shelter when snow accumulates to depths of 20 inches or more. Severe winter weather virtually confines deer to wintering areas for long periods during which the depletion of available browse can lead to high deer mortality, especially for fawns with limited fat reserves. Severe decline in the deer population can be traced directly to adverse winters. Within the Adirondacks, the carrying capacity of deer wintering areas limits the carrying capacity of the entire annual range of the deer population.

In response to the threat of Chronic Wasting Disease (CWD) being potentially introduced into New York, DEC has placed a ban on feeding wild deer under most circumstances. Feeding deer artificially concentrates them in one location for extended periods of time. CWD is most likely transmitted from deer to deer by direct contact between animals, or indirectly through contact with waste food, urine, and feces that build up at feeding sites, although the exact transmittal mechanism is currently unknown. Although CWD has not been found in New York, this measure is a precaution to help prevent the spread of CWD if it already exists in the state, or if it is introduced later. DEC is currently collecting tissue samples from white-tailed deer populations throughout the state to test for the presence of CWD. Sampling has occurred in the general vicinity of VMWF and CWD has not been detected in those deer populations.

Although relatively numerous, it is believed that black bears are seldom encountered in the unit by hikers on the trail. Habitat conditions support a stable bear population well-suited to the area.

Moose (*Alces alces*), while low in numbers, are making a slow comeback in northern New York after having been absent since the 1860's and may be an occasional visitor to the VMWF. Moose tracks have been noted in VMWF and at least one animal sighting was reported in 2000. It is estimated that the current moose population in northern New York may be approximately 200 animals or more. Additionally, successful reproduction has been confirmed. Although moose prefer to feed on species of woody vegetation generally found in forests of earlier successional stages than those occurring in the VMWF, moose in general find later-stage forest habitats more suitable than do white-tailed deer and may come to occupy the unit in greater numbers in the future. Experience from Vermont and New Hampshire indicates that the moose population will likely increase in the future.

In the northeastern United States, moose use seasonal habitats within boreal and mixed coniferous/deciduous forests. The southern distribution of moose is limited by summer temperatures that make the regulation of body temperature difficult. Moose select habitat primarily for the most abundant and highest quality forage (Peek 1997). Disturbances such as wind, fire, logging, tree diseases, and insects create openings in the forest that result in regeneration of important hardwood browse species such as white birch, aspen, red maple, and red oak. Typical patterns in moose habitat selection during the summer include the use of open upland and aquatic areas in early summer followed by the use of more closed canopy areas (such as upland stands of mature aspen and white birch) that provide higher quality forage in late summer and early autumn. After the fall rut and into winter, moose intensively use open areas again where the highest biomass of woody browse exists (i.e., dormant shrubs). In late winter when browse quantity and quality are lowest, moose will use closed canopy areas that represent the best cover available within the range (e.g., closed canopy conifers in boreal forest). From late spring through fall, moose commonly are associated with aquatic habitats such as lakes, ponds, and streams. However, their use of aquatic habitats can vary geographically over their range. It is believed that moose use aquatic habitats primarily to forage on highly palatable plants, however, moose may also use these areas for relief from insects and high temperatures.

Amphibians and Reptiles

Relatively short summers and the long, cold winters of VMWF hypothetically limit the number of species of reptiles and amphibians. Three species of turtles, five species of snakes, eight species of salamanders, one species of toad, and eight species of frogs are believed to be residents of VMWF. See Appendix E, Table 6 for a listing of reptile and amphibian species recorded during the New York State Amphibian and Reptile Atlas Project located within or partially within the Vanderwhacker Mountain Wild Forest. These data represent species observed during the ten-year span of the project (1990-1999).

Endangered, Threatened, Species of Special Concern and Other Unique Species

Title 6 New York Code of Rules and Regulations (NYCRR) Part 182 defines and lists endangered and threatened species of fish and wildlife and fish and wildlife species of special concern. Although the specific location of these species is exempted from public Freedom of Information Laws (FOIL) to protect the species, this information is used and integrated by DEC in all resource planning activities. Three endangered species which are or may be found in VMWF are the round whitefish, the spruce grouse (possible breeder) and the peregrine falcon (confirmed breeder). No spruce grouse have been confirmed as nesting in the unit, but the species is listed as a possible breeder in one of the 70 Breeding Bird Atlas blocks. Peregrine falcons have been confirmed as nesting in the vicinity of Lower Ausable Lake. There is also a possible but unconfirmed peregrine falcon nesting site in the vicinity of Ragged Mountain. In addition, a New York Natural Heritage Program report from the 1970's lists an eyrie somewhere in the mountains around the hamlet of North River along the Warren-Essex line, which could include parts of VMWF. The round whitefish has been documented in biological surveys of Newcomb Lake, which is addressed in the High Peaks Wilderness Area Unit Management Plan.

Among the threatened species of wildlife which may be residents of the VMWF is the northern harrier (possible breeder).

Species of special concern, which have been observed in the VMWF, include the small-footed bat, common loon (confirmed breeder), American bittern (confirmed breeder), osprey (confirmed breeder), Bicknell's thrush (confirmed breeder), sharp-shinned hawk (possible breeder), Cooper's hawk (confirmed breeder), goshawk (confirmed breeder), red-shouldered hawk (possible breeder), common nighthawk (possible breeder), whip-poor-will (probable breeder), red-headed woodpecker (probable breeder), wood turtle, blue-spotted salamander and Jefferson salamander.

Osprey (*Pandion haliates*)
The osprey population in New York appears to be stable and may be increasing slightly. Osprey breed near large bodies of water, including rivers and lakes, that support abundant fish populations. Osprey typically construct their nest in tall dead tress, but also use rocky ledges, sand dunes, artificial platforms, and utility pole crossarms. Nests are placed in locations that are taller than adjacent areas, which provide vantage points. According to information gathered during DEC's annual osprey surveys, one osprey nest has been confirmed in Pottersville Marsh, near Pottersville and other nests are located relatively close to but outside the bounds of the VMWF.

Common Loons (*Gavia immer*)
Common Loons use small and large freshwater lakes in open and densely forested areas for breeding and nest on lakes as small as two acres. Special habitat requirements include bodies of water with stable water levels with little or no human disturbance. Loons use islets for nesting and shallow coves for rearing their young. Nests are constructed on the ground at the water's edge on sand, rock, or other firm substrates. Loons prefer small islands for nesting (to avoid predators) but will also nest along protected bays and small peninsulas of the shoreline.

Loons have been observed on Wolf Pond, Mink Pond, Cheney Pond, Oliver Pond, Newcomb Lake, Henderson Lake, Trout Pond, Thumb Pond, Hewitt Pond, and Boreas Pond. In addition, the 2002 Adirondack Cooperative Loon Program's (ACLP) annual census reported the presence of adult loons and chicks on Sand Pond (North Hudson) and Stony Pond (Minerva). Loons normally swallow small pebbles as "grit" to help their gizzards break down bones from the fish they eat. Occasionally, the birds mistake fishing tackle for pebbles and then succumb to lead poisoning after ingesting lead sinkers or jigs. The specific impact this has had on loon populations in VMWF is unknown but, lead poisoning due to fishing tackle ingestion is a source of mortality in adult loons throughout the northeastern US (ACLP, 2003). The Adirondack Cooperative Loon Program offers a program whereby anglers can exchange their lead sinkers for non-toxic sinkers at numerous locations throughout the Adirondack Park. More information on this program is available at www.adkscience.org/loons. New York State recently passed legislation that will prohibit the sale of certain lead sinkers. Beginning in May 2004, the sale of lead fishing sinkers (including "split shot") weighing one-half ounce or less will not be permitted.

Bicknell's Thrush (*Catharus bicknelli*)
Throughout the range of Bicknell's thrush, montane forest dominated by stunted balsam fir and red spruce is the primary habitat. Bicknell's thrush utilizes fir waves and natural disturbances as well as the dense regenerated ecotones along the edges of ski slopes. The breeding habitat of Bicknell's thrush is located in the Adirondacks at elevations > 2800 ft. The species is most common on the highest ridges of the Adirondacks, preferring young or stunted dense stands of balsam fir up to 9 ft. in height. Here they lay their eggs above the ground in the dense conifer thickets. While found in the nearby HPWA as low as 2700 ft. (Lake Colden) it is most numerous on higher ridges up to an elevation of 4500 ft. Levine (1998)

has identified breeding season reports on 27 Adirondack and 14 Catskill mountains. In 2000 New York State created an Adirondack Sub-alpine Bird Conservation Area to identify habitat where management action should take into account breeding areas of Bicknell's thrush and other high elevation breeding species. Bicknell's thrush, a Species of Special Concern, has been identified by several sources as occurring within the unit (NYS Breeding Bird Atlas, Lambert et.al., 2002).

Red-headed Woodpecker (*Melanerpes erythrocephalus*)
Both wetlands (forested and riverine wetlands, beaver impoundments, dead tree swamps) and uplands (grasslands with scattered trees, golf courses, pastures, roadsides) are used by nesting Red-headed Woodpeckers (Bull, 1974). Red-headed Woodpeckers also are attracted to old burns and recent clearings. Nests are usually located in snags or dead limbs of live trees, or in the absence of trees, poles, fences, or roofs (Ehrlich, 1988).

Common Nighthawk (*Chordeiles minor*)
Two distinct habitats are used by nesting Common Nighthawks: bare flat rocks or bare ground in open fields and pastures, and, more recently (since the mid-late 1800s), on flat, gravel rooftops (Bent, 1940). In upstate New York nighthawks also nest in mountainous areas, provided woods are interspersed with clearings or openings (Bull, 1974).

American Bittern (*Botaurus lentiginosus*).-- In the Adirondacks, the American Bittern is a bird of freshwater emergent wetlands where it typically nests on a grass tussock or among the cattails. Here it lays its eggs from 4 to 18 inches above the water (Bull, 1974) in scanty nests made from sticks, grass, and sedges. Separate paths are made in the tall vegetation for entering and exiting the nest (Ehrlich et al., 1988).

Peregrine Falcon (*Falco peregrinus*)
The Peregrine Falcon is listed as endangered in New York State. After extirpation of Peregrines in the 1960s, in 1974 New York initiated a program to reintroduce the falcons in the state. Peregrines were successfully hacked in the Adirondack Park with the release of the first birds in 1981. It is possible that Peregrines presently use the VMWF or surrounding areas for nesting due to the following: (1) suitable nesting habitat exists within and surrounding the VMWF, (2) Peregrines have previously been observed in the area (3) at least two historic sites are located in the nearby vicinity, and (4) young Peregrines hatched from Adirondack eyries are returning to the Adirondacks and consequently selecting new areas for nesting.

Three basic habitat requirements are necessary for nesting Peregrine Falcons including open country in which to hunt, sufficient food resources (i.e., other avian species), and steep, rocky cliff faces for nesting (Ratcliffe, 1993). The falcons typically nest 50 to 200 feet off the ground and often near a river, stream, or other water body. Nesting sites for Peregrines usually include a partially-vegetated ledge (with both herbaceous and woody species) that is large enough for at least several young to move about during the pre-fledging period. The nest is a well-rounded scrape that is sometimes lined with grass. Ideally, the eyrie ledge also is sheltered by an overhang that protects the chicks from inclement weather. Occasionally, Peregrines may nest in old Common Raven nests. Suitable nest sites (e.g., snags, live trees, ledges) are located on the cliff face near the eyrie, on more distant sections of the cliff, and on the cliff rim.

Red-shouldered Hawk (*Buteo lineatus*)
Red-shouldered Hawks breed in moist hardwood, forested wetlands, bottomlands and the wooded margins of wetlands, often close to cultivated fields, Red-shouldered hawks are reported as rare in mountainous areas. Special habitat requirements include cool, moist, lowland forests with tall trees for nesting. Red-shouldered hawks forage in areas used as nesting habitat as well as drier woodland clearings and fields.

Cooper's Hawk (*Accipiter cooperii*)
Cooper's Hawks use a variety of habitat types, from extensive deciduous or mixed forests to scattered woodlots interspersed with open fields. Floodplain forests and wooded wetlands are also used by Cooper's Hawks. Cooper's hawk construct nests typically at a height of 35 to 45 feet in both conifer (often white pine) and deciduous trees (often American beech). Nests are commonly constructed on a horizontal branch or in a crotch near the trunk. Cooper's Hawks have been known to use old crow nests as well. Foraging areas are usually located away from the nest in forested areas or open areas adjacent to forest.

Whip-poor-will (*Caprimulgus vociferus*)
Whip-poor-wills select open woodlands in lowland deciduous forest, montane forest, or pine-oak woods (Ehrlich, et. al., 1988) that is interspersed with open fields, with a preference for dry oak-hickory woods in some areas of upstate New York (Bull, 1974). Whip-poor-wills nest on the ground in dry, sparse areas. Eggs are typically laid in the open or under a small shrub on the leaf litter where they are well concealed (Bent, 1940).

Sharp-shinned Hawk (*Accipiter striatus*)
Sharp-shinned Hawks prefer breeding habitats that consist of open or young woodlands that support a large diversity of avian species, the hawk's primary prey (Johnsgard, 1990). Although Sharp-shinned Hawks use mixed conifer-deciduous forest for nesting, most nests recorded in New York State have been located in conifers, with 80% of the nests found in hemlocks (Bull, 1974).

Northern Goshawk (*Accipiter gentilis*)
A combination of tall trees with a partial canopy closure for nesting and woodlands with small, open areas for foraging are important habitat parameters for the Northern Goshawk (Johnsgard, 1990). In New York State, goshawks prefer dense, mature, continuous coniferous or mixed woods where they typically place their nest 30-40 ft. off the ground in the crotch of a tree (Andryle and Carroll, 1988).

Northern Harrier (*Circus cyaneus*)
The Northern Harrier is a bird of open country in associated wet to mesic habitats (Johnsgard,1990). Results of a 1979 survey showed that bogs and other wetland habitats provided nesting sites for Northern Harriers in the Adirondacks (Kogut, 1979 *In*: Andryle and Carroll 1988). Unlike most New York raptors, harriers nest on the ground, either on hummocks or directly on the ground in nests that are woven from grass and sticks (Andryle and Carroll, 1988).

Spruce Grouse (*Falcipennis canadensis*)
In the Adirondacks, the rare Spruce Grouse is a denizen of the boreal acid bog forest where it selects immature or uneven-aged spruce-fir habitat (Andryle and Carroll, 1988). Mosses, lichens, and shrubs provide nesting and foraging ground cover in areas where the forest canopy is less dense. Because their forested wetland habitat is poorly drained, grouse move on to upland summer range to dust and forage (Andryle and Carroll, 1988).

Wood Turtle (*Glyptemys insculpta*)
The wood turtle is a semiaquatic turtle found in streams with sandy-pebbly substrates that are deep

enough so that they do not freeze during hibernation, are well-oxygenated, and have good water quality. Streams used by wood turtles may flow through upland deciduous or coniferous forest, upland successional fields, forested wetlands, low compact shrub swamps, bushy shrub swamps, and emergent wetlands. Ideal habitat includes dense alder swamp and forested wetland habitat bordering the streams where the turtles can bask in filtered sunlight, yet have adequate cover from predators (Quinn and Tate, 1991; Kaufmann, 1992; Tuttle and Carroll, 1997; Compton et al., 2002). Turtles will often seek out open areas in forested habitat for basking. Wood turtles will use less desirable habitat for foraging on food items such as fungi and sparse herbaceous vegetation. Some researchers consider wood turtles an edge species, but this is more a function of seeking out suitable foraging or basking areas. Primary habitat also includes suitable nesting habitat in sandy open areas that is just moist enough for successful egg development. Wood turtles select both slopes and level areas for nest sites. Historically (and presently where suitable habitat exists) wood turtles nested on naturally-occurring sand banks along streams and rivers. Now many nests are excavated in man-made sandpits (Tuttle, 1996).

Wood turtles are listed as a Species of Special Concern in New York State where they also are protected as a small game species (with no open season). Populations of wood turtles are particularly vulnerable due to their low reproductive potential (including their late age of sexual maturity [usually 15 yrs] and high egg and hatchling mortality). Range-wide, the species is declining due to habitat degradation and both commercial and incidental collecting for the pet trade, a practice that has extirpated entire populations (Garber and Burger, 1995).

Jefferson salamander (*Ambystoma jeffersonianum*)
Jefferson salamanders are considered vernal pool obligates. The salamanders require pools that remain deep long enough to complete metamorphosis. Typical Jefferson salamander breeding pools are ringed with scattered shrub vegetation in upland deciduous forest. Although vernal pols are a limiting habitat parameter for Jefferson salamanders, adults spend a very short period actually using the pools, remaining there only during the breeding season (Pfingsten and Downs, 1989). Consequently, the surrounding forested habitat used during the remainder of the year (including during hibernation) is of utmost importance.

Blue-spotted salamander (*Ambystoma laterale*)
The blue-spotted salamander, also a species of special concern, is more tolerant of disturbed areas and open habitat than is the Jefferson salamander (Klemens, 1993, Pfingsten and Downs, 1989) . Although blue-spotted salamanders also breed in temporary pools, they also use a variety of other habitats including roadside ditches, field ponds, and other wetland habitats. Even though blue-spotted salamanders are most often encountered above ground on wet nights, they also are found under cover objects such as fallen logs and debris (Klemens, 1993).

Small-footed Bat (*Myotis leibii*)
In the Adirondacks small-footed bats overwinter in mines and caves where hibernating populations exceed 500 individuals. Here they roost on exposed ceilings and walls, in cracks and crevices, and under rocks. Summer roosting habitat includes talus slopes, holes in the ground, abandoned swallow nests, and roosts in or near man-made structures (Saunders, 1989).

Significant Habitats

- **Deer Wintering Areas:** Roughly thirteen historical deer wintering areas are located at least partially within the VMWF: Harris Lake, Hudson River (several large linear areas), Northwoods Club, Vanderwhacker Brook, Boreas River (several large linear areas), Thurman Pond, Alder Brook, and Trout Brook. Deer wintering areas are dynamic, so some of these areas may no longer be used or may not hold deer every winter, and other areas may not have been identified as yet.

- **Caves/Bat Hibernaculum:** Of particular historical and natural history interest is a bat hibernaculum located in Burroughs Cave along the Boreas River. In the 1860's, John Burroughs wrote "One afternoon we visited a cave, some two miles down the stream, which had recently been discovered. We squeezed and wriggled through a big crack or cleft in the side of the mountain, for about one hundred feet, when we emerged into a large dome-shaped passage, the abode, during certain seasons of the year, of innumerable bats, and at all times of primeval darkness." In a 4/27/77 survey, 18 little brown bats (*Myotis lucifugus*) were confirmed by DEC personnel. On 4/2/81, DEC personnel recorded 107 little brown bats and two northern long-eared bats (*Myotis septentrionalis*) in Burroughs Cave. These figures suggest Burroughs Cave is a relatively small hibernaculum when compared to others in the Adirondack region. The difference in number of bats counted in each survey can probably be explained by the time of year when the surveys were performed. The 1977 survey was performed towards the end of April, a time when many of the bats may already have ended their hibernation and left the cave. Management recommendations relating to the hibernaculum include: continue to monitor bat use of the hibernaculum; request that spelunking public avoid entering the cave from September 15 through May 15; refrain from developing trails and/or other facilities near the cave.
- **Historic Bald Eagle Nesting Sites:** unknown. No current confirmed nesting documented.
- **Historic Golden Eagle Nesting Sites:** Santanoni Preserve, Newcomb Lake.
- **Historic Peregrine Falcon Nesting Sites:** Lower Ausable Lake, Ragged Mountain, mountains around North River
- **Common Loon:** Newcomb Lake (nesting), Wolf Pond (nesting), Hewitt Pond (nesting).
- **Great Blue Heron Nesting Sites:** unknown
- **Spruce Grouse:** possible breeding in vicinity of the Ausable Lakes.
- **Round Whitefish:** Newcomb Lake
- **Bicknell's Thrush:** prefer peaks over 2,800 feet in elevation with dense subalpine thickets, in particular coniferous forests. Bicknell's thrush prefer dense thickets of young growth of balsam fir and spruce, as well as cherry and birch. Will also utilize heavy second growth of these tree species. Sometimes found below 2,800 feet.

Extirpated Species

The timber wolf, cougar, and lynx may have once inhabited the VMWF. All have disappeared from the Adirondacks. The mammals' disappearance was mostly a result of unregulated harvest and habitat destruction in the 19th century. However, the once extirpated moose population has naturally regained a foothold in VMWF. Projects to reestablish the peregrine falcon, bald eagle, wild turkey and Canada lynx have been conducted and, with the exception of lynx, have been successful. Moose occasionally have migrated from the north and east into the Adirondack region for decades. Since 1980, they have arrived in sufficient numbers to have established a scattered resident population, recently estimated to contain around 200 individuals. A few sightings have been reported in VMWF and moose tracks along trails in the unit are common.

Efforts to reintroduce the peregrine falcon and the bald eagle through "hacking" programs began in 1981 and 1983, respectively. In a continuing program of yearly releases, 103 falcons were "hacked" in the Adirondacks through 1988. In 1985, two falcon nests were found, one to the north and one just to the east of the High Peaks Wilderness. There are two confirmed peregrine falcon nesting sites near VMWF, one on Lower Ausable Lake and another near Chapel Pond. Additionally, there is a possible site on Ragged Mountain. Other historic nesting sites within the unit may come to be occupied as the population expands. Between 1983 and 1985, 55 bald eagles were hacked within the Adirondack region. The first sexually mature eagles produced by the hacking program returned to nest in an area well north of the VMWF. No bald eagles are known to nest within the VMWF; however bald eagles have been observed in the nearby High Peaks Wilderness.

The SUNY College of Environmental Science and Forestry, through the Adirondack Wildlife Program, completed an experimental project to reintroduce the Canada lynx to the Adirondack High Peaks region. Under permit from DEC, scientists based at the College's Huntington Forest campus in Newcomb planned to release up to 100 cats within the HPWC, the upper elevations of which support ideal lynx habitat. The first release of five lynx took place in January 1989; by the winter of 1990-1991, this number increased to 83 released animals. Numerous lynx strayed from the release sites. Vehicle collisions claimed a high percentage of the released animals. At this point, it is highly unlikely that any lynx remain, at least in numbers suitable for a self-sustaining population, and it is doubtful that a permanent lynx population will be established. No breeding has been documented although sightings continue to be reported from time to time.

c. Fish

Fish communities in the Adirondacks are a result of geological and human influences. Prior to human influences relatively simple fish communities were common. Human-caused changes in habitat and introduction of fishes have altered those natural communities.

Geological History

The Fishes of the Adirondack Park, a DEC publication (August 1980) by Dr. Carl George of Union College, provides a summary of geological events which influenced the colonization of the Adirondack ecological zone by fishes. A limited number of cold tolerant, vagile, lacustrine species closely followed the retreat of the glacier. Such species presumably had access to most Adirondack waters. About 13,000 BP (before present) glacial Lake Albany, with a surface elevation of 350' a.s.l. (average sea level), provided a colonizing route for Atlantean and eastern boreal species to portions of the Hudson Watershed. Barriers above that elevation would have excluded those species from interior portions of the Adirondacks.

By about 12,300 BP, the Ontario lobe of the glacier had retreated sufficiently to allow species associated with the Mississippi drainage access to fringes of the Adirondacks via the Mohawk Valley and the St. Lawrence drainage including Lake Champlain. Lake Albany had apparently drained prior to that, as barriers had formed on the Lake George outlet.

The sequence of colonization routes to surrounding areas, combined with Adirondack topography, resulted in highly variable fish communities within the Adirondacks. In general, waters low in the watersheds would have the most diverse communities. The number of species present would have decreased progressing towards headwater, higher elevation sections. Chance and variability in habitat would have complicated the trends. Consequently, a diversity of situations, from no fish to monocultures to numerous species, occurred in various Adirondack waters.

Acid Precipitation

The phenomenon of acid ion deposition, popularly known as "acid rain," has had little impact on the fisheries resources in the Vanderwhacker unit. The pH ranges from 5.9 to 7.8 on most area ponds for which chemistry data is available. Values of pH less than 7.0 represent acidic conditions, but fish species found in Adirondack ponds are very tolerant of pH values down to 6.0. Values of 5.0 and below are considered to be severely detrimental to aquatic life. Although 23 of the waters have not had water chemistry surveys (Appendix B, beginning on page 125), those waters are either small or are contiguous with larger water bodies where chemistry data is available.

Brook Trout
The available information suggests that brook trout were well represented in the unit but their exact distribution remains obscure because the area was heavily impacted by the early establishment of non-native species. Today brook trout are maintained principally through routine stocking and by reclamation.

Streams
Major streams in the Vanderwhacker Unit include the Boreas River, Vanderwhacker Brook and Minerva Stream. Many additional small streams are also present. The Hudson River borders portions of the unit. Fisheries resources and management for the Hudson River will be discussed in the Hudson Gorge Primitive Area Unit Management Plan and will not be reviewed herein.

The Boreas River and its main tributary, Vanderwhacker Brook flow through the central portion of the Vanderwhacker Unit. In addition, portions of Minerva Stream flow through the unit. These streams and their tributaries support coldwater communities of fishes including: brown trout, brook trout, cutlips minnows, common shiners, blacknose dace, longnose dace, northern redbelly dace, creek chub, white sucker and slimy sculpin. In addition, smallmouth bass, a warmwater species, have been collected in portions of the Boreas.

3. Visual/Scenic Resources/Land Protection

a. Travel Corridors
The main corridors for automobile traffic through VMWF are State Route 28N and Blue Ridge Road, also known as Boreas Road. Route 28N is the main route from North Creek to Newcomb and offers many spectacular views. In particular, between North Creek and the Warren-Essex line one is presented with several excellent views of the cliffs of Moxham Mountain. As 28N winds through the hamlet of Minerva, it offers beautiful vistas of Green Mountain and Snyder Hill in VMWF and the peaks of Hoffman Notch Wilderness Area beyond. Further north, the State Highway climbs up into VMWF and weaves its way through lush hardwood forests, past the picturesque vale of Balfour Lake, and on through the thick forests of spruce, fir, and pine on either side of the Boreas River, occasionally rounding a corner to offer a brief, yet dramatic glimpse of the sheer slopes of the High Peaks to the north.
Blue Ridge Road is also quite scenic as it threads its way between North Hudson and Newcomb. Not far from Cheney Pond, there is a scenic pull-off to the top of a small knob, offering fabulous views of the Boreas River and Minerva Stream valleys to the south.

Additionally, the APSLMP lists a spot in VMWF along Barton Mines Road three miles south of the hamlet of North River as a Scenic Vista, or potential scenic pull-off.

b. Observation Points
VMWF's namesake offers the best opportunity for panoramic vistas on the unit. Although the summit of Vanderwhacker Mountain is thick with tall firs and birches, the fire tower atop it presents a 360° view to anyone inclined to climb it. From the tower, the views of the High Peaks are magnificent. The course of the Boreas River can be followed to the Hudson, as the spectacular scenery of the Adirondacks spreads out for many miles before the intrepid climber.

Another sensational summit within VMWF is the so-called fourth peak of Moxham Mountain, known on recent USGS quadsheets as Maxam. The mountain gets its name from Robert Moxham, who surveyed Dominick's Patent in 1798. Its summit may have been used in Verplanck Colvin's surveys of the area, explaining the remnants of a Colvin tower at its summit and why it is known locally as Signal Mountain.

From atop its dizzying cliffs, one can spy Gore Mountain and Pete Gay Mountain to the south, as well as various peaks along the Hudson River and its gorge. Moxham offers a view, ranging 180°from the northwest to the southeast, strewn with myriad Adirondack peaks stretching to the horizon. A proposed trail to this summit, capitalizing on its awe-inspiring views, is discussed in Section IV of this UMP.

There are several lesser peaks and ledges in VMWF that deliver rewarding views to anyone ready to leave the beaten path. These include Green Mountain, its many rocky outcrops offering views of the Minerva Stream valley and beyond, Dutton Mountain with glimpses up the Hudson River Gorge, and Snyder Hill whose steep sides offer many a scenic vista.

c. Other Natural Areas

Other significant natural areas include the Boreas River and the many lakes and ponds of VMWF. Indeed, the Boreas River is quite scenic and in particular, the Boreas River Loop trail parallels a particularly interesting portion of the river as it drops dramatically in a series of rapids above Hewitt Eddy. Along the banks of the Boreas, near to where Vanderwhacker Brook enters it, impressive stands of large white pine can be found. Other exemplary stands of large diameter white pine are located on high spots among the wetlands of the north branch of Wolf Creek. Examples of noteworthy stands of northern hardwoods, including large diameter sugar maple, yellow birch, and eastern hemlock, exist on the east side of the Boreas and to the north of the Northwoods Club Road. This area is recognized in the APSLMP (pg 101) as “Boreas Hardwood” [sic].

4. Rare Ecological Communities -

The New York Natural Heritage Program (NYNHP) is a cooperative effort between The Nature Conservancy and DEC to identify, inventory, and provide information on the occurrence of rare plants and animals and exemplary natural communities in New York State. The Vanderwhacker Mountain Wild Forest has not had a complete survey of significant communities. However the NYNHP has identified five significant communities located at least partly within the boundaries of VMWF, two of which are considered to be the best example of their respective type in the Adirondacks.

The first two communities are located on the shores of Lake Harris in the town of Newcomb. The first community, an “Inland Calcareous Lake Shore”, occupies a narrow band (2-8 meters wide) around parts of the lake shore. The community is described as graminoid dominated, typically sparse in shrub species, but with an overhanging tree canopy of mostly northen white cedar and balsam fir. The soils are a mix of calcareous and acidic sands. In general, this community occurs intermittently along the shores of the lake, and is indicated by the NYNHP to be the best known northern Appalachian variant in New York. This community has a global rank of G4? and a state rank of S3S4 (for an explanation of ranks and a map, see Appendix D, page 146). The community occurs on private and public land along the lakeshore. The management recommendations made by NYNHP that relate to VMWF suggest minimizing soil and vegetation disturbance, and maintaining natural water level fluctuations. There are no VMWF facilities on or near the shoreline where the community occurs, and none are proposed in this UMP. Public use of these parcels is not currently threatening this community. Therefore, no actions are planned for further protection of these sites beyond continued monitoring by NYNHP.

The second significant community, a “Limestone Woodland”, occurs in small patches in general proximity to the first community. It is characterized by 90% tree cover including mostly northern white-cedar, eastern hemlock and yellow birch, and limestone outcrops. This community has a global rank of G3G4 and a state rank of S2S3. Again, its location on VMWF is similar to the first plant community, as are the management recommendations made by NYNHP. Therefore, no action beyond continued monitoring is advocated.

The third significant community, noted as "Maple-Basswood Rich Mesic Forest", is known to exist in at least one area of VMWF, where it covers approximately 25 acres, all of which is located on state land. This forest type typically occurs on middle to lower elevation, concave slopes with north or east aspects and includes sugar maple, basswood, and white ash as the dominant trees. This plant community is common in the western and central portions of the state, but less common to the Adirondacks. The community has a global rank of G4 and a state rank of S2S3. There are no facilities located within this community, nor are any proposed in this UMP. Therefore, no action beyond continued monitoring is advocated.

The fourth and fifth unique communities, an "Aquatic Cave Community" and a "Terrestrial Cave Community", exist in Burroughs Cave. Both community types have global ranks of G4 and state ranks of S3S4. The cave is considered the best example of an Aquatic Cave community in the Adirondacks. More data on this community are needed (Reschke). Characteristic bats that hibernate in Terrestrial Cave Communities include little brown bat (*Myotis lucifugus*), Keen's bat (*Myotis keenii*), big brown bat (*Eptesicus fuscus*), and eastern pipistrelle (*Pipistrellus subflavus*). As discussed earlier, Burroughs Cave has been known to support hibernating little brown bats, as well as northern long-eared bats (*Myotis septentrionalis*). There are no facilities located in or near Burroughs Cave, nor are any proposed. Management recommendations relating to the cave include: continue to monitor bat use of the hibernaculum; request that spelunking public avoid entering the cave from September 15 through May 15; refrain from developing trails and/or other facilities near the cave.

Three other exemplary communities have been identified on private land in close proximity to lands of the VMWF. These are a "Mesotrophic Dimitic Lake" (Rich Lake, Newcomb), a "Rich Graminoid Fen", and a "Medium Fen" (both in Newcomb). Descriptions of these community types are found in *Ecological Communities of New York State* (Reschke) or can be viewed at www.dec.state.ny.us/website/dfwmr/heritage/EcolComm.htm.

B. Man-Made Facilities

Trails and Roads

Designated Foot Trails	Length (miles)
Hewitt Pond trail	5.0
Tower trail	2.5
Boreas River Loop trail	2.0
Hoffman Notch trail (north end)	2.0
Camp Santanoni - Lake Harris Campground trail [2]	1.5
Rankin Pond trail	0.4
Roaring Brook trail	0.4
Rabbit Pond and Oak Ridge trails	0.4
Center Pond trail	0.2
Total	**14.4**

[2]This trail was apparently marked after the adoption of the APSLMP but before the development of a UMP for VMWF without consultation with the APA. This plan proposes to adopt the trail formally.

Snowmobile trails	Length (miles)
Cheney Pond - Irishtown trail	9.5
Vanderwhacker trail (currently closed) (includes 1.0 mile of foot trail)	8.0
Stony Pond - Irishtown trail	5.8
Linsey Marsh trail	2.0
Horseshoe Pond trail	0.9
Charley Hollow trail	0.85
Thilo trail	0.75
Thilo trail (northwest branch)	0.35
Horseshoe Pond bypass	0.2
	Total 28.35

Motor Vehicle Roads	Length (miles)
Moose Pond Road	3.6
Cheney Pond access road	0.7
Horseshoe Pond Road	0.9
Thilo Road	0.75
Charley Hollow Road	0.3
Sunnyview Farm road	0.2
	Total 6.45

Administrative Roads (closed to the public)	Length (miles)
Roosevelt Truck Trail	2.5
Oliver Pond fish barrier dam access	0.05

Brief Description of Origins of VMWF Trails and Roads

Hewitt Pond foot trail - may have been built as early as the late 19th century for fishing access to Hewitt and Barnes Ponds, and exists on maps from 1901. Some sources believe it was built by Michael Cronin, proprietor of Aiden Lair in the late 1800's; unknown when connection from Barnes Pond to Stony Pond was constructed but appears to be remnant of an old tote road.

Tower trail - presumably built during or before 1911 to provide access to Vanderwhacker summit.

Boreas River Loop trail - southern half exists on 1901 quadsheets as trail extending from 28N to the Moose Pond Club, date of construction of northern half unknown.

Hoffman Notch trail (northern end) - historic route through the notch; was a designated snowmobile trail until adoption of the APSLMP made it a non-conforming use and it became a foot trail.

Camp Santanoni -Lake Harris Campground connector - probably derived from herdpath between the two facilities; probably marked with DEC trail markers in 1980's to encourage use of a single path. This UMP proposes that the trail be officially adopted.

Rankin Pond trail - unknown, presumably derived from herdpath for fishing access.

Roaring Brook, Rabbit Pond, and Oak Ridge trails - presumably built in connection with ski use of Little Gore, perhaps as early as the 1920's.

Center Pond trail - has been a popular fishing site over the years, and there have been many trails leading to it as indicated on past USGS quad sheets.

Cheney Pond - Irishtown snowmobile trail - northern 2 miles served as motor vehicle access to Lester Dam for log drives until 1950; much of the remaining mileage existed prior to 1897 as part of a road from Irishtown to the other dams on the Boreas River... LaBier Dam, Brace Dam, and Boreas Ponds Dam; has served as a snowmobile trail, at least since the 1960's.

Vanderwhacker snowmobile trail - the majority of the trail exists on USGS quadsheets of Newcomb from 1901 and 1954 (labeled as a jeep trail), and is reputed by some to have been an original route to the summit of Vanderwhacker Mountain; there are a handful of sites along the trail that may have been old farms or homesteads at one time; has served as a designated snowmobile trail over the years, but is currently closed. Its future status as a snowmobile trail will be determined through this UMP process.

Stony Pond - Irishtown snowmobile trail - southern end (almost as far as Big Sherman Pond) presumably built originally for access to iron mine on Green Mountain in the latter half of the 19th-century; section between the Sherman ponds and Stony Pond exists as a trail on the 1953 USGS quadsheet, presumably for hunting and fishing access, although the original trail may have been on the east shore of Big Sherman Pond until beaver activity raised the level of the pond and flooded the low causeway between Big and Little Sherman Ponds; origin of northwestern end unknown but may have been built shortly after 1950 for the removal of forest products after the blowdown; exists on 1954 USGS Newcomb quadsheet as a "jeep trail", but is not found on 1953 USGS Schroon Lake quadsheet; has served as a snowmobile trail probably since the 1960's.

Linsey Marsh snowmobile trail- obviously an old road for some of its length, date or purpose of construction unknown; several old foundations along trail; has been used as a snowmobile trail (presumably since the 1960's) and foot trail over the years.

Horseshoe Pond bypass snowmobile trail - does not appear on USGS quads; was built by the Conservation Department in the late 1960's in an effort to improve snowmobile trail connections in the Town of Schroon (personal communication - H. Lashway).

Moose Pond Road (also known as Vanderwhacker Road) - provides the only motor vehicle access to the private Moose Pond Club inholding as well as the Vanderwhacker Mountain Tower trailhead. The original road followed the course of the southern half of the Old Military Road and then the western half of the current Moose Pond Road. In 1892, the eastern half of the road was built as it appears today, taking advantage of the state bridge over the Boreas River. This road is used almost daily in the non-winter months by the private owners of Moose Pond Club and by the public.

Cheney Pond access road - presumably built at the same time as the Lester Dam access road to provide access to the pond for log drives, and has been open to public motor vehicle use since state acquisition. This road sees frequent public motorized vehicle use due to the popularity of Cheney Pond to recreationists of all kinds.

Sunnyview Farm Road - the road leaves Fourteenth Rd. just east of where it becomes, according to the current Dutton Mountain USGS quadrangle, a 4WD trail; the road, which appears on the 1901 Newcomb quadrangle, served as access to the privately held Sunnyview Farm until state acquisition in the 1980's. Motorized public use of the road is likely limited to the occasional hunter.

Roosevelt Truck trail - was likely built in the 1930's by the CCC for reforestation as there are extensive softwood plantations along much of its length. Other evidence suggests that it may have been built earlier than this. It may have served as a route from residences along Blue Ridge Road to the former schoolhouse on 28N just north of Aiden Lair. Also may have served as an access road for fire suppression activities over the years. It is gated and closed to the motoring public.

Oliver Pond fish barrier dam access road - presumably built in 1965 to aid in the construction of the Oliver Pond fish barrier dam.

Muller Pond Cemetery access road - part of original road around the south end of Muller Pond that junctions with Hoffman Road at both ends. Several old farm sites are located off of and along this road. Exists on maps from the early 1900's.

West end of Thilo Road - exists on 1897 USGS Schroon Lake quadsheet as a connection between Trout Brook Road and Charley Hill Road.

Other Facilities

Parking Lots Total 13	Capacity
Vanderwhacker Mtn. trailhead	4
Moose Pond Rd near 28N	4
Stony Pond trailhead[1]	3
Blue Ridge Rd & Boreas River[2]	6
Hewitt Rd (east end)[2]	5
Cheney Pond[1]	4
Rankin Pond trailhead	1
Roosevelt Truck trail (south end)	2
Oliver Pond	2
Muller Pond	4
Linsey Marsh trailhead[1]	5
Boreas River Loop trail[1]	2
28N & Boreas River	5

Trail Registers Total 4	Location
Vanderwhacker Mountain	Moose Pond Road
Hewitt Pond	Hewitt Road
Stony Pond	Route 28N
Boreas River	Route 28N

[1]pull-off along road shoulder

[2]town or county snowplow turn-around

Primitive Campsites Total 38	Number
Moose Pond Rd	6
Boreas River & 28N	5
Cheney Pond (east shore)	1
Cheney Pond (west shore)	1
Cheney Pond overlook	1
Oliver Pond	2
Boreas River & Blue Ridge Rd	2
29th Pond	1
Vanderwhacker Mtn. trailhead	1
Northwoods Club Rd & Boreas River	6
Northwoods Club Rd & Huntley Pond	1
elsewhere along Northwoods Club Rd	3
Roosevelt Truck Trail - south end	1
Newcomb Lake (near Santanoni)	3
28N and Vanderwhacker Brook	1
14th Road at Deer Brook	1
14th Road at Sunnyview Farm Road	1
Boreas River at Lester Dam	1

Pit Privies Total 18	Number
Moose Pond Rd	4
Boreas River & 28N	2
Cheney Pond	2
Stony Pond	1
Oliver Pond	1
Muller Pond	1
Newcomb Lake campsites	3

Boreas River & Blue Ridge Rd	1
Boreas River & Northwoods Club Rd	3

Buildings Total 4	Location
Observer Cabin (old)	Vanderwhacker Mtn. tower trail
Observer Cabin (new)	Vanderwhacker Mtn. tower trail
Ranger Cabin	28N & Minerva-Newcomb town line
Garage (storage)	28N & Minerva-Newcomb town line

Fireplaces Total 13	Number
Northwoods Club Road campsites	2
Cheney Pond campsite	1
Route 28N & Boreas River campsites	5
Oliver Pond	4
Stony Pond lean-to	1

Gates

Total 4

Roosevelt Truck Trail & Blue Ridge Rd

Roosevelt Truck Trail & 28N

Cheney Pond snowmobile trail (north end)

Chaisson Rd (Newcomb)

Bridges

Total 12

Type	Location	Quantity
Foot	Hewitt Pond Foot Trail	4
Foot	Muller Pond Outlet	1
Snowmobile	Linsey Marsh Trail	1
Snowmobile	Vanderwhacker Trail	3
Vehicle	Moose Pond Road	1
Vehicle	Roosevelt Truck Trail	1

Lean-to (1)
Stony Pond

Fire Tower (1)
Vanderwhacker Mountain

Fish Barrier Dam (1)
Oliver Pond (Schroon)

Water Flow Gauge (1)
outlet of Nate Pond (Minerva)

Signs
There are a limited number of signs located in the unit including trailhead signs, fishing and camping regulations posters, and directional signs. At present, the level of signage is appropriate to the unit.

Bog bridging
There is a 550' section of bog bridging at the northern end of the Hewitt Pond foot trail on the fringes of a spruce-fir swamp associated with Stony Pond Brook and the western outlet of Hewitt Pond. The bog bridging is constructed of logs and rough lumber and is in fair condition.

C. Past Influences

Historic and Archaeological Resources

The term “cultural resources” encompasses a number of categories of human-created resources including structures, archaeological sites and related resources. The Department is required by the New York State Historic Preservation Act (SHPA - PRHPL Article 14) and SEQRA (ECL Article 8) to include such resources in the range of environmental values that are managed on public lands. The Adirondack Forest Preserve was listed as a National Historic Landmark by the National Park Service in 1963. This designation also results in automatic listing in the State and National Registers of Historic Places.

Within the Forest Preserve, the number of standing structures is, in general, limited due to the requirements of the APSLMP. Often those that remain are structures that relate to the Department's land management activities such as fire towers, ranger cabins and related resources. Fire towers, as a class of resources, have been the subject of considerable public interest over the last decade. The majority of surviving fire towers have been found eligible for inclusion in the State and National Registers of Historic Places and a number of towers were formally listed in the Registers in 2001. For state agencies, Register listing or eligibility are effectively the same; obligating the Department to treat these resources appropriately and requiring that special procedures be followed should it be necessary to remove or otherwise affect these resources. This formal listing is in addition to the SHPA Memorandum of Agreement relating to fire towers that the Department signed with OPRHP in 1994. This agreement was designed to accommodate the requirements of the APSLMP and the SHPA. The Vanderwhacker Mountain fire tower is eligible for inclusion in the State and National Registers of Historic Places. A recent evaluation by OPRHP has found that the Ranger Cabin located along Route 28N meets eligibility criteria, as well.

Archaeological sites are, simply put, any location where materials (artifacts, ecofacts) or modifications to the landscape reveal evidence of past human activity. This includes a wide range of resources ranging from pre-contact Native American camps and villages to Euro-american homesteads and industrial sites. Such sites can be entirely subsurface or can contain above ground remains such as foundation walls or earthwork features.

As a part of the inventory effort associated with the development of this plan the Department arranged for the archaeological site inventories maintained by the New York State Museum and OPRHP to be searched in order to identify known archaeological resources that might be located within or near the unit. The two inventories overlap to an extent but do not entirely duplicate one another. The purpose of this effort was to identify any known sites that might be affected by actions proposed within the unit and to assist in understanding and characterizing past human use and occupation of the unit.

The quality of the site inventory information varies a great deal in all respects. Very little systematic archaeological survey has been undertaken in New York State and especially in the Adirondack region. Therefore all current inventories must be considered incomplete. Even fewer sites have been investigated to any degree that would permit their significance to be evaluated. Many reported site locations result from 19th century antiquarian information, artifact collector reports that have not been field verified. Often very little is known about the age, function or size of these sites. This means that reported site locations can be unreliable or be polygons that encompass a large area. Should systematic archaeological inventory be undertaken at some point in the future it is very likely that additional resources will be identified. The results of these site file checks are presented in Appendix F.

The archaeological inventory of the Vanderwhacker Mountain Wild Forest reflects the known general characteristics of the area's history. No precontact Native American sites are known within the unit but several have been identified in the immediate area, primarily along major watercourses. Euro-American sites within the unit reflect land use prior to state acquisition. These include a number of farmstead sites and the remains of mining and logging operations. The results of the site file checks are shown in Appendix F.

Evidence of human settlement and occupation exists throughout VMWF. Old farm clearings, stone and barbed wire fences, foundations, softwood plantations, old hunting camps, and woods roads and trails exist in many places in the unit including sites along 14th Road, near Cheney Pond, around Balfour Lake, along Charley Hollow Road, and countless other locations. Since almost all of the area was logged and/or settled, few locations within the unit are without evidence of human interference.

A list of locations of cultural significance would include the 19th century cemetery on state land to the west of Muller Pond. The Town of Schroon has traditionally maintained the cemetery, usually in one maintenance visit each year. Interestingly, at least one Vanderwarker is buried in this cemetery. There is another cemetery on the unit from the same era, also in the Town of Schroon. It is likely known only by locals and does not appear to be maintained by anyone.

Also, several old roads and dump-sites are located on portions of the former Scaroon Manor property within the borders of VMWF. Additionally, portions of the original Santanoni Preserve that were not included in the final boundary of the Camp Santanoni Historic Area contain ruins associated with the Great Camp, and are located in VMWF.

2. Historic Sites - Two documented archeological sites are located in the unit and are listed in Appendix F. These were 19th century industrial sites owned by the Minerva Iron Company under E.H. Rosenkrans and J.C. Durand. The sites were active for a brief period in the 1870's and were used for the extraction of iron ore. Other sites located on state and private land within two miles of VMWF are also listed and include sites predating Euro-american settlement, as well as additional 19th century industrial sites. It is quite likely that additional sites of historic value are located on VMWF, but have not been found or recorded. The Department will record the locations of additional sites upon discovery.

Other historically significant sites include the fire tower on Vanderwhacker Mountain and its associated observer's cabins, the many old dams used in the river drives of the 19th and 20th centuries, and the CCC-era ranger station and garage on Route 28N near the Newcomb-Minerva town line. Other sites of historical and cultural significance are listed on page 4, earlier in this document.

D. Public Use

1. Land Resources

A wide variety of activities are allowed on VMWF and its facilities due to its land classification under the APSLMP. Most trails in the unit are used by a variety of recreationists including those interested in hunting, fishing, hiking, skiing, snowmobiling, bicycling, and snowshoeing. Bicycle use is occasional, due to the rough character of many of the unit's trails. Most users of VMWF travel by foot or snowmobile.

The Department monitors trail use by voluntary registration. Trail registers are located at the following trailheads: Boreas River Loop, Hewitt Pond, Stony Pond, and Vanderwhacker Mountain. The public's use of the registration boxes varies depending on register location, time of visit, entry hours, length of stay, and group size. These variables generally result in inaccurate and often incomplete data. However, patterns and general levels of use can be gleaned from existing register information. Register information for VMWF trails is listed below.

In the following table, the first number for each trail represents the total number of entries for that year. The second number represents the total number of registered visitors. The third number, where present, represents the visitor-days, a number which allows one to measure the registered overnight use associated with a particular entry point.

	Boreas River loop foot trail[1]			Hewitt Pond foot trail			Stony Pond snowmobile trail			Vanderwhacker Mtn. foot trail		
year	entries	visitors	days	entries	visitors	days	entries	visitors	days	entries	visitors	visitor-days
1994	27*	85*	–	33	81	–	189	453	–	272	750	–
1995	222*	551*	–	19	44*	–	279	622	–	235	698	–
1996	201*	498*	–	33	67	–	224	644	–	241	612	–
1997	36*	80*	–	21 †	32 †	–	208	539	–	305	815	–
1998	223*	595*	–	27 †	72 †	–	35*	106*	–	297	758	–
1999	–	–	–	26 †	49 †	–	226	562	–	297	737	–
2000	–	–	–	24	60	–	150*	382*	–	308	787	–
2001	–	–	–	20 †	30 †	30 †	200	532	597	319 †	787 †	813 †
2002	–	–	–	35	68	82	221	473	545	326 †	866 †	878 †
2003	–	–	–	20	34	36	182	455	473	309	768	818

* denotes partial data - not all register pages were recovered for this location and time period
† denotes estimated data - generally 1 month or less has been estimated using data from other years
– denotes no data available

Of course, the value of these numbers is questionable for several reasons, including most obviously, a lack of complete data for all registers, due to missing pages. There is an obvious need to improve data collection for the above trails and to obtain use data for DEC trails and facilities for which there are no registers. These proposals will be discussed later in this document in the Management Recommendations section.

A few conclusions can be drawn from the above data:

- Approximately 1,300 visitors annually sign in at the three remaining trailhead registers.
- On average, registered users travel in small groups; generally of 2-3 people.
- The majority of registered use occurs at the Vanderwhacker Mountain tower trail.
- The majority of registered use at Vanderwhacker Mountain occurs during the mid- and late-summer months, and there is little registered winter use in comparison. This is expected, since the 3 mile distance from Route 28N to the trailhead is not plowed in winter.
- Most registered overnight use occurs at the Stony Pond trail. Registered overnight use at the Vanderwhacker Mountain trail is low, especially when one considers that much of that registered use in the last few years can be attributed to Student Conservation Association work crews completing trail maintenance projects on and around the mountain.
- The Stony Pond trail experiences highest registered use in July, August, and September as well as a spike in use in late April and early May, corresponding with the opening of the trout season.

[1]Boreas River register was relocated in 2004 in an attempt to improve data retention. In its previous location, the register was often vandalized and the register sheets destroyed..

- The Hewitt Pond trail receives little registered use, particularly in the winter months.
- There is a problem with data retention at the Boreas River loop trail. (Note: This trail register was relocated in 2004, following the release of the Draft UMP for Public Review).
- Limited data make it difficult to quantify public use of the VMWF.

Furthermore, register numbers for the Stony Pond snowmobile trail probably do not reflect actual snowmobile use, in part due to the location of the trail register at just one end.

Additionally, significant seasonal use during big game season is rarely captured by trail registration data. Many hunters access the unit along its periphery, and not always at Department trailheads.

Missing pages for the Boreas River Loop trail register is an obvious problem. For the years 1994 and 1997, many of the spring and summer months are missing, but the other years generally lack two months of data or less. Up until 2004, this register was directly adjacent to the trail parking area, so any pages were missing due to vandalism. In an effort to improve use figures for this trail, the register was relocated in the summer of 2004.

New trail registers will be installed at trailheads where they do not currently exist, in order to capture public use data over the unit. A recently developed Standard Operating Procedure (SOP) outlining responsibilities of DEC Forest Rangers and Foresters in Region 5 related to trail register data should help to improve collection, retention, and reliability of public use data.

For the most part, impacts of use on trails in VMWF are relatively minor due to relatively low use. Most trails have suffered from a lack of regular maintenance and need additional funding, which has generally been more responsible for any resulting resource degradation. Poor design and layout (coupled with some level of use) have resulted in erosion on portions of the Vanderwhacker Mountain tower trail. For this particular trail, a re-route around a particularly steep section is proposed in Section IV of this plan. Furthermore, due to the grade, design, and expected increase in future use of the tower trail, it should receive priority when planning trail maintenance activities. According to trail register figures, the Stony Pond snowmobile trail experiences the next-highest degree of registered use in the unit. Most of that use probably occurs from foot traffic between 28N and Stony Pond. Consequently, that portion of the trail appears to be most impacted by use and should be the second priority for trail maintenance activities in the unit. For this particular trail, a number of activities are proposed in Section IV of this plan.

Other negative impacts have occurred at Oliver Pond and Muller Pond, including soil compaction, injury to and death of vegetation, and eroding of the ponds' banks. For these locations, management actions are proposed later in the plan to restrict vehicles from the ponds' edges and contain parking to well-defined areas. Heavily-used campsites on the Northwoods Club Road and at Cheney Pond have caused minor impacts, including trampling of vegetation, soil compaction and erosion.

Non-designated and user-created campsites are known to exist at several locations in VMWF, although it is likely that not all have been found. Known sites occur at the following locations: off-trail on Dutton Mountain; along the Vanderwhacker Mountain tower trail (one several hundred yards above the observer's cabins and one a similar distance below); along Moose Pond Road; along the Vanderwhacker snowmobile trail (where it crosses the North Branch of Wolf Creek); at Brace Dam; north of Brace Dam on the old Lester-La Bier-Brace road; on Hotwater Pond; on Muller Pond; on Nate Pond; at the east end of Hewitt Pond; at Sunnyview Farm. For the most part, these sites are not heavily used and impacts are low. An exception is the Muller Pond site. This non-designated site can be directly reached via motor vehicle and is located too close to the pond. Consequently, overuse here has lead to adverse impacts to the site. Management actions proposed later in the plan will address this problem. In general, for other

non-designated and user-created sites, if they are used only rarely (five times per year or less) and are causing no noticeable adverse impacts, they will remain. If they are well-used, appropriately located, and Limits of Acceptable Change standards for vegetation and soil are not being exceeded (see Capacity to Withstand Use discussion later in this section), they will be officially designated. If they are overused and are causing significant adverse impacts, they will be either relocated or closed.

Projecting future demand and use of the VMWF is difficult, to say the least. Economic changes have the potential to affect annual use of the area as much as weather patterns. When the national or regional economy takes a down turn people tend to take less expensive vacations and take them closer to home. The proximity of the Adirondack region to major eastern metropolitan centers makes primitive camping an attractive alternative. A strong Canadian dollar may increase the number of Canadian visitors to the region. Conversely, the aging of the baby-boomer generation may reduce the overall population interested in primitive backcountry recreation activities. Uncertainty in the future underscores the importance of monitoring use and health of the Forest Preserve so that adverse impacts can be identified and addressed early.

The Vanderwhacker Mountain tower trail is likely to see increased use, due to the recent formation and activities of a "Friends of" group and the general rise in use seen at other towers in the Park. Existing data suggest that registered use has not increased significantly within the last ten years and that current registered use is quite low and may actually be among the lowest in the Park, when compared to other tower trails. Annual registered users of the Vanderwhacker tower trail typically number around 800. Other tower trails generally see much higher registered use; Wakely Mountain - 2,000 people annually on average; Hadley Mountain - 14,000 people annually on average; Blue Mountain - 13,000 people annually on average. Goodnow Mountain, which is located on private property nearby, has averaged 4,000 to 7,000 registered users annually over the past ten years. The Vanderwhacker Mountain tower trail, however, possesses certain characteristics that will likely limit a potential increase in use due to the activities of the "Friends" group: the Moose Pond Road is unplowed in winter; said road is unpaved and may dissuade owners of low-clearance vehicles from proceeding; the tower is located relatively distant from population centers; and other more easily accessed towers and open peaks are nearby. However, in preparation for an increase in use that will likely occur, certain trail projects, as described in Section IV, should be implemented. This trail should also receive high priority for maintenance.

Use of some of the unit's other trails (for instance, the Linsey Marsh, Rankin Pond, Hewitt Pond, Boreas River loop, and Cheney Pond trails) cannot be expected to increase greatly if past trends in the unit can be used as an indicator of future use. For example, registered use at the Hewitt Pond, Boreas River loop, and Stony Pond trails (albeit spotty) has remained relatively stable over the last ten years. Snowmobile use of the Stony Pond trail, however, can be expected to increase, if the trail is used in the overall snowmobile connection between Newcomb and Minerva - as is proposed in this UMP. Just how much of an increase it will see, however, is difficult to predict. Current registered use is quite low and well within the capacity of the trail to withstand use. It is suspected that snowmobile use is not well-represented by the available use figures for that trail, due to the absence of a trail register at the south end of the trail, but personal observations by DEC staff indicate that the trail sees relatively low levels of snowmobile use.

Mountain bike or All-Terrain Bicycle (ATB) use is expected to remain relatively low on most trails in the VMWF. Few trails in the unit are particularly attractive to most ATB'ers, because most trails are too steep, too rough, too wet, too short, or unconnected to other ATB routes. An exception might be the trail proposals connecting the Lake Harris Campground with Santanoni. Since ATB use on the Newcomb Lake Road is well-established, an expanded network in this area may attract increased numbers of ATB'ers. However, LAC indicators and standards on soil erosion and impacts to vegetation will be

developed to monitor and address negative impacts, if needed. Seasonal closures will also be utilized, if necessary. The potential for increased conflicts between equestrian users and ATB'ers exists, given new ATB trail construction in this area, but reported instances of user conflict on Newcomb Lake Road have been relatively low. Most users expect to see a wide variety of recreationists using the road, and thus are considerate and appropriately careful. Signage making users aware of the types of other uses they may encounter during their trip and encouraging them to follow trail etiquette, such as IMBA's "Rules of the Trail", will go a long way towards reducing user conflict, should it increase significantly.

In other Forest Preserve UMPs, DEC planners have indicated that an observed recent decline in trailhead registrations in the nearby High Peaks Wilderness Area, thought to have occurred due to the recent adoption of use restrictions in that unit, may be leading to user displacement to other nearby Forest Preserve units, including the Dix Mountain Wilderness and the Giant Mountain Wilderness Areas. However, they suggest that displaced users are seeking Forest Preserve units with similar characteristics. This may lead to some slight increase in use of the VMWF, but is much more likely to affect other nearby Forest Preserve units, such as the DMWA, the GMWA, the Hurricane Mountain Primitive Area, the Sentinel Range Wilderness, or the Jay Mountain Wilderness. These areas have the similar characteristics, such as the high-elevation open peaks and the "Wilderness" classification, that users of the HPWA typically seek. Users looking to "bag" a 4,000 ft open peak, like Marcy, Gothics, or Haystack, are likely to be disappointed by the VMWF.

Unauthorized Use

There are several access roads (not currently maintained by local or state government) over VMWF that lead to private land and are occasionally used by the public as well as private landowners and their guests to access their land via ATV and 4WD vehicles. These include:

- Four wheel drive road across state land on lot 37, Township 26, Town of Minerva. This accesses the private inholding on lot 38, owned by Finch, Pruyn & Company, Inc. The length on state land is approximately 0.25 miles. It is used by the owner and their lessees.
- Road across lot 16, Thorn's Survey, Township 27, Town of Newcomb. This accesses an inholding on lot 25, owned by Finch, Pruyn & Company, Inc. The length on state land is approximately 0.25 miles. It is used by the owner and their lessees.
- Stony Pond - Irishtown snowmobile trail. The southern end is occasionally driven by ATV's as far as Big Sherman Pond.
- Cheney Pond - Irishtown snowmobile trail. The southern end is driven by ATV's, presumably by owners of the private inholdings near Mud Pond and their guests to access the properties.
- Road across Lots 118 and 119 in Township 26, accessing an inholding on lot 118. The length on state land is approximately 0.75 miles. A TRP was issued in 1997 allowing the owner to use the road in the removal of forest products. However, there is no known deeded right-of-way to this property across state land.
- Access road across Lot 32 of Thorn's Survey of Township 27 to reach privately-owned camp on Lot 22
- Access road across Lot 46 of Bailey's Patent in Township 25 to access private property on Lot 47.

Department maintenance occurs only on those trails listed above that are designated snowmobile trails. However, such maintenance is designed with the effects of foot and snowmobile traffic in mind, not motorized vehicles. Impacts to the Stony Pond trail -though relatively minor - include minor erosion and rutting. However, potential effects along the Cheney Pond trail are more significant, given the several

crossings of Minerva Stream and its tributaries. Motorized use on several of the above access roads - including the Lot 118 access road and the Lot 38 access road - has lead to severe erosion of the roadbed, and could lead to sedimentation and siltation in nearby streams and ponds. Regular maintenance of these access roads (by any party) is not apparent. If it can be determined that private property owners do not possess a legal right to travel these access roads by motor vehicle, the roads should be closed to such use and water diversion devices installed until the roads can be re-vegetated.

It should be noted that the opportunities for ATV use on Forest Preserve are very limited. All claims by inholders regarding rights of access across Forest Preserve in VMWF should be substantiated by documentation produced by private inholders and will be researched by DEC.

2. Wildlife

The opportunity to encounter animals in the wild adds a dimension of excitement to a wilderness experience. Visitors to VMWF enjoy wildlife from a number of perspectives, including wildlife observation and photography and hunting and trapping. A diversity of wildlife species may be observed near old meadows, beaver flows and other wetlands, lakes, and streams. Public use tends to be concentrated in and around population centers, roads, and more accessible areas.

The pursuit of wildlife-related activities provides substantial economic income to the state and local communities throughout New York. Birdwatchers spend money on equipment, gas, and food. The expenditures of sportsmen who hunt or trap are important to NY's economy. Expenditures for licenses, equipment, firearms, ammunition, gasoline, lodging, meals, and a variety of other purposes infuse money into the local economy. The value of the meat or hides obtained further adds to the value. Besides the value for hunting and trapping, wildlife attracts people for a variety of other uses, such as hiking, bird watching, and photography. People pursuing these activities also contribute to the state and local economy.

A number of mammals and birds which occupy VMWF may be hunted or trapped during regulated seasons set annually by DEC. The two big game species which may be hunted in the unit are the white-tailed deer and black bear. Both may be taken during archery, muzzleloading, and regular seasons. In addition, there is an early season for black bear that begins in mid-September. Small game species that may be hunted in the unit include: waterfowl, woodcock, crow, ruffed grouse, coyote, bobcat, raccoon, red fox, gray fox, weasel, skunk, varying hare, and gray squirrel. Terrestrial furbearer species that may be trapped include coyote, bobcat, fisher, marten, raccoon, red fox, gray fox, weasel and skunk. Aquatic species that may be trapped include beaver, otter, muskrat and mink.

Harvest information for big game, small game and furbearers is collected annually by the Department on a county, town and Wildlife Management Unit (WMU) basis via a number of different systems. The law requires that big game hunters report deer and bear harvests. Trappers are required to have beaver, fisher, otter, marten, coyote and bobcat pelts sealed by a Department representative within 10 days following the close of those seasons or before sale of the pelts, whichever occurs first. Harvest estimates for other species are collected either by a telephone survey or mail survey.

No survey to determine the number of hunters or trappers utilizing the VMWF has been conducted. Past studies by DEC indicate that few sportsmen stop at trailhead registers. However, it can be assumed that VMWF, in general, is attractive to those hunters and trappers desiring solitude because of its generally rough terrain, and high ratio of acres of land to miles of road, in spite of relatively low densities of wildlife populations. Some areas of the unit do sustain significant hunting activity. Hunting pressure for big game originates principally from access points along Route 28N and the Blue Ridge Road. Hunters who work

interior reaches of the unit either camp in the interior or gain access from adjacent private lands where they have leased hunting rights.

The popularity of the special hunting season for muzzleloading firearms, first opened in the 1977-1978 season, has been on the increase throughout the Adirondacks. A legislative change in 1991 allowed successful muzzleloader hunters to purchase a second tag valid for an antlered buck during the regular season only. This legislation has significantly increased interest in muzzleloader hunting, although use of portions of VMWF remains relatively light. The Bureau of Wildlife monitors the populations of game species partly by compiling and analyzing harvest statistics, thereby quantifying the effects of consumptive wildlife use. In addition to deer and bear harvest statistics, information on the harvest of small game and furbearers is compiled by town, county, and Wildlife Management Unit (WMU). VMWF is mostly in WMU's 5H, 5F, with a very small part in 5G. Given that the towns of North Elba, Keene, Chester, Indian Lake, and Johnsburg contain little, if any VMWF lands, harvest statistics for deer and bear for these towns have not been included in this plan. Vanderwhacker Mountain Wild Forest, most of which can be considered deer range, comprises slightly less than half of the total area of deer range contained in the remaining four towns (Newcomb, Minerva, Schroon and North Hudson) in which the bulk of the unit is situated. Since these four towns contain a total of 705 square miles of deer range, the densities of deer harvest for each of the last five years can be calculated and range from 0.43 to 0.52 deer per square mile. Although it is not known how the deer harvest is distributed within the towns, it can be assumed that, because of the unit's heavily forested condition and relative inaccessibility to hunters, fewer deer per square mile are harvested on state lands within VMWF than in surrounding areas. The narrow range of variation in annual harvest densities, and the fact that the taking of bucks has little impact on the reproduction capacity of a deer population, lead to the conclusion that the populations of the four towns and consequently, of VMWF, are capable of withstanding current and anticipated levels of consumptive use. Deer harvest figures for the towns of Newcomb, Minerva, Schroon and North Hudson and Wildlife Management Units 5F, 5G and 5H are presented in Appendix E, Tables 2 and 3.

An analysis of black bear harvest figures for the four VMWF towns coupled with a study of the age composition of harvested bears, has indicated that hunting within the towns has had little impact on the reproductive capacity of the bear population. Under existing regulations, the unit's bear population is capable of withstanding current and anticipated levels of consumptive use. Harvest figures by town are listed in Appendix E, Table 4.

The Bureau of Wildlife monitors furbearer harvests by requiring trappers to tag the pelts of beaver, bobcat, coyote, fisher, marten, and otter. Beaver, fisher, marten, and otter can be susceptible to overharvest to a degree directly related to market demand and ease of access. Harvest regulations are changed when necessary to protect furbearer populations. Harvest figures by town are listed in Appendix E, Table 5.

The remaining hunted and trapped species are relatively common, widely distributed and fairly abundant throughout the Adirondack region. Hunting and/or trapping pressure on these species in VMWF is assumed to be relatively light.

Despite the lack of wildlife information specific to VMWF, no need has been identified to obtain such information for widely distributed species. It is more practical to study and manage populations over broader areas defined by ecological characteristics that extend beyond Forest Preserve Unit boundaries. Lacking, however, is site-specific information on insects, molluscs, and to a lesser degree, reptiles and amphibians. Future inventories of these species would be beneficial, particularly with respect to endangered, threatened, and species of special concern.

3. Fisheries

Quantitative information about the numbers of anglers who visit the waters of the Vanderwhacker Mountain Wild Forest Area is unavailable. However, fishing is a popular activity in selected waters.

Fishing pressure is generally higher on the more readily accessible lakes and streams, but angler use of the unit's streams is believed to be less than on lakes and ponds. Much of the fishing activity is concentrated on coldwater lakes, and on Adirondack brook trout ponds (See definitions on page 125). Trout fishing on lakes and ponds typically peaks in April, May, and June when trout can still be found in the cool water near the surface. Surface fishing activity declines in the summer due to formation of a thermocline which causes fish to move to deeper water. Warmwater (See definitions) angling on the unit's warmwater lakes peaks in July-August. Descriptions of the ponded waters of the unit can be found in Appendix B.

4. Water Resources

Aside from fishing, the water resources of VMWF are mainly used by the public for wildlife viewing, non-motorized boating, and of course for their general scenic character. However, accurate information regarding public use of the water resource does not exist. At one time, there were two DEC registers relating to water bodies on VMWF, yet their value in collecting reliable use information was questionable and they have since been removed. The first was in the hamlet of Newcomb on the west bank of the Hudson River, just south of the Route 28N bridge within the DOT highway right-of-way. This register was installed in the early 1980's as part of a coordinated search and rescue plan for boaters on the river. This access point in Newcomb was quite popular before the advent of commercial rafting trips, which now use the Indian River to access the Hudson Gorge. It was not uncommon for users to underestimate the amount of time needed for the trip from Newcomb to Warren County, and hence, DEC Forest Rangers were often called in to locate missing boaters. Thus the register was installed to track boaters in case the need arose. However, the need for search and rescue efforts has decreased significantly since most users now enter the Hudson Gorge via the Indian River. Consequently, the register went largely unused in recent years, became obsolete, and was removed.

The second register of water use was located on the left bank of the Boreas River[1], near the Route 28N crossing. This register served both the users of the river and the nearby Boreas River Loop foot trail. Registered use of the river was extremely low. Besides the flat water of Lester Flow, the Boreas River is not commonly used by boaters because of its rapid descent below this point and frequent shallows. In fact, below Lester Flow, the river is only runnable by expert boaters at medium-high water and contains many class IV and V rapids. In "Adirondack Canoe Waters; South and West Flow", Alec Proskine describes a section further down the river:

> "...the world suddenly tips, and your boat starts flying by trees, boulders and water so fast, you think you are in a new world of water. It becomes sheer ecstasy or terror, depending on your ability and the water conditions. [In this section] the river drops with a gradient of 111 feet per mile, making it the steepest canoeable river in the Adirondacks for this distance."

Needless to say, it can be quite dangerous.

Most waterbodies, substantially or fully contained within VMWF, are small and accessible by non-motorized means only. These ponds receive limited use by anglers willing to carry small boats or canoes

[1]In 2004, this register was relocated. In its new location, it should improve retention of use figures for the Boreas River Loop trail, but will not function as a record of river use.

moderate to long distances to aid in fishing. These ponds include Stony Pond, Rankin Pond, Wolf Pond, Hewitt Pond and to some extent Newcomb Lake, which is accessed by most through Camp Santanoni Historic Area. Of course, there are several ponds and lakes with less demanding ingress that receive heavier use including Oliver Pond, Cheney Pond, and Harris Lake. The latter is probably most heavily used, due to the public campground on the northeast shore and the generally private ownership of the south shore. In fact, VMWF occupies less than half the available frontage of Lake Harris, and offers no launching facility as the need is already fulfilled elsewhere on the lake. Cheney Pond probably experiences highest use in mid- to late-summer and early fall due to the access road and the existence of primitive campsites on the east and west shores of the pond, but public use figures are not available. Oliver Pond, in the Town of Schroon, has a hand-carry launching facility, but again, public use data is unavailable.

The State recently acquired a parcel of land providing access to the east side of Balfour Lake from Route 28N. The construction of a public hand carry launching facility on this site will be discussed in the Management Recommendations section of this document.

E. Recreational Opportunities for Persons with Disabilities

The Federal Americans with Disabilities Act of 1990 ("ADA") along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973, have important implications for the management of all public lands, including the Vanderwhacker Mountain Wild Forest. A detailed explanation of the ADA and it's influence on management actions is provided on page 71.

In 1997, DEC adopted policy CP-3, Motor Vehicle Access to State Lands under Jurisdiction of the Department of Environmental Conservation for People with Disabilities, that establishes guidelines for issuing Temporary Revocable Permits allowing qualified people with disabilities to use motor vehicles to gain access to designated routes on certain state lands. No specific locations for such use were identified in the Vanderwhacker Mountain Wild Forest. However, in this UMP, opening of a portion of the Roosevelt truck trail for such use is proposed. See Section IV and Appendix J for more detail.

To date, no universally accessible structures or improvements have been designed or constructed within the Vanderwhacker Mountain Wild Forest. Compliance with the ADA and Americans with Disabilities Act Accessibility Guidelines (ADAAG) must begin with an appropriate assessment. An assessment entails the use of a formal process that examines the facility (such as a trail, lean-to, picnic area) in terms of the standards established by ADAAG (either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. A schedule for completing such an assessment is presented in Section VI of this plan.

In the absence of a formal assessment, staff observations have identified a few appropriate opportunities to develop universally accessible improvements without fundamentally altering the nature of programs offered to the public. These opportunities are presented as Management Actions later in this plan.

> Balfour Lake - A recently purchased parcel on Route 28N will provide the public with a roadside access point to this small lake in the Town of Minerva. A new parking facility and car top boat launch will be constructed on the parcel and should be designed to be ADAAG compliant. In addition, access sites on Cheney Pond and Oliver Pond may also be appropriate sites to improve for access for the mobility impaired.
>
> Boreas River Campsites - There are several campsites along the Northwoods Club Road where it crosses the Boreas River that should be upgraded to ADAAG standards. Hardening an existing camp pad, and making a privy and picnic table accessible are proposed later in the plan.

Muller Pond Campsites - There are existing informal campsites near the pond's outlet that may be suitable to be upgraded to ADAAG standards. Hardening an existing camp pad, and making a privy and picnic table accessible are proposed later in the plan.

Roosevelt truck trail - Open 2 miles of this administrative road to CP-3 permit holders rather than the Arrow road in the Wilcox Lake Wild Forest. The Arrow road was originally contained in the recent ADA Consent Decree, but the old road possesses a low capacity to withstand motor vehicle use. The Roosevelt truck trail is much more suitable. In addition, construct two primitive tent sites to ADAAG along the Roosevelt truck trail in order to provide camping and hunting opportunities to people with disabilities.

F. Relationship between Public and Private Land

1. Land Ownership Patterns

As mentioned previously, the unit borders other Forest Preserve units in a few places and a fair amount of private land, as well. To the north and west of the unit, much of the private land is owned by Finch, Pruyn & Company, Inc., managed for the production of forest products, and may also be leased to rod and gun clubs. The Open Space Institute (OSI) recently purchased approximately 10,000 acres around Henderson Lake, known as the Tahawus property, from National Lead Industries. A majority of this acreage is slated to be sold to the state and added to the Forest Preserve. Approximately 3,000 acres will remain as working forest and several hundred acres comprising the historic Village of Adirondac will be managed as an historic district, with conservation easements to these portions of the property to be acquired by the State. National Lead will retain the old mine site. West of VMWF and Camp Santanoni, the SUNY College of Environmental Science and Forestry owns the 15,000-acre Huntington Forest, where it conducts research projects focusing on the study of Adirondack natural resources and systems. Private lands on the southern and eastern boundaries of the unit are mainly individually owned and also used in the production of forest products and/or as primary and secondary residences. The several private inholdings completely surrounded by VMWF are also owned by forest product companies, private hunting clubs, or private citizens and are generally used in the production of forest products, as summer camps, or as secondary residences. Most of these private lands are posted against public use.

Uses on the properties bordering VMWF are generally of a nature that does not seriously impact large areas of VMWF. However, timber trespasses are not unknown and are investigated promptly by DEC Forest Rangers and/or Environmental Conservation Officers. The threat of such activities and others stemming from neighboring private land, such as illegal motorized use of trails and old access roads, causes slight economic impact through increases in signing and law enforcement costs on an irregularly shaped unit such as VMWF.

Most VMWF facilities are sufficiently distant from private land and do not seriously impact neighboring owners. The exceptions include a handful of neighbors whose properties are close to trailheads or other facilities and may experience such annoyances as increased foot or vehicular traffic and occasionally, vandalism. Over the years the Hewitt Pond Club has experienced problems of trespass stemming from the nearby DEC foot trail. The Club owns the western shore of the pond, including lands underwater. At one time, they went so far as to place buoys across the pond warning the public against trespass. However, use of the trail and the pond is usually restricted to locals, who are now well aware of the boundary. Additionally, the caretaker sees to it that new visitors are aware of the line.

The Moose Pond Club, a private inholding in the Town of Minerva, has also experienced problems due to nearby VMWF facilities. The Club is accessed via Moose Pond Road, which is maintained largely at the expense of its members. The road is also used to access the Vanderwhacker Mountain fire tower foot

trail, and consequently sees much use by the public. The argument is made by the Club members that increased public use shortens the necessary schedule of road maintenance, leading to increased costs for the Club. Keeping the road open to motor vehicles is in the interest of the People of the State of New York, as the summit of Vanderwhacker Mountain offers some of the best views anywhere in the Adirondacks. The round-trip distance from the trailhead to the summit and back is 5 miles; a suitable distance for a family-oriented foot trail. If motorized use of the road by the public were prohibited, the round-trip distance from 28N to the summit and back would be over 11 miles, which would preclude use by the majority of people who currently enjoy use of the trail. Therefore, it is in the best interest of the People of the State of New York to work out a suitable method to share the cost of maintenance with the Moose Pond Club. This proposal will be discussed further in Section IV of this plan.

Changes in wildlife habitats occur constantly due to natural processes such as succession, blowdown, beaver activity, and disease or human activities such as logging and residential development. Within the VMWF, development and logging are not allowed. The lack of logging will allow the forest to mature, but will also limit the amount of early successional habitats, and will limit management options for wildlife. Logging on private lands adjacent to the VMWF will provide some early successional habitat. Private lands adjacent to the VMWF are managed quite differently than VMWF lands. Fields can be kept open, and logging is allowed. This adds considerable diversity to the types of habitats present. This diversity in habitat leads to more diversity in wildlife also. The fields, and openings created by logging, provide habitat for early successional species. Many of these species will be more common on the private lands than on VMWF. Considering the amount of forest preserve land within the Adirondacks, it is unlikely that forest fragmentation on these private lands will be a negative issue. It is probable that many of the species of wildlife within VMWF will actually benefit from the habitats found on adjacent private lands.

2. Land Use Regulations

Much of the private land both surrounding and surrounded by the unit is zoned “Resource Management” or “Rural Use” by the APA. Around the Hamlets of Minerva, Olmstedville, Newcomb, North Creek, and Pottersville, the unit shares short borders with private land zoned “Low Intensity Use”, “Moderate Intensity Use”, and “Hamlet.” These zones and the uses allowed within them are defined in the Adirondack Land Use and Development Plan. As is implied by the fact that the unit abuts private lands in six different zones, there is a wide variety of activity that could take place on lands adjacent to the unit.

3. Impact of NYS Ownership on Adjacent Lands

The economic impact of state ownership on adjacent private land is minor, although desirable, attributable to an increase in the value of the private lands due to a confidence in future stability of area use.

Although the state does pay full taxes on the assessed value of Forest Preserve Lands pursuant to Real Property Tax Law §532(a), there may nonetheless be some impact on the area’s other taxpayers. Some argue that if Forest Preserve land were privately held and “improved”, property taxes on this land would increase, adding to the tax base. State ownership precludes improvements which generate significant property tax increases. However, this state land generates tax revenues without creating the public service demands usually required by improved properties.

As stated above, Forest Preserve lands are subject to taxation in accordance with section 532(a) of the Real Property Tax Law. State government pays taxes on unimproved forest lands equivalent to those paid by private landowners. State lands are assessed by local government assessors. The tax rate established by each local government jurisdiction is applied to the assessment and determines the taxes on the parcel. The tax must be comparable to rates on similar private lands.

For the year 2000 in Essex and Warren Counties, the total property tax amount paid to the county, towns and school districts by the State was $9,569,092. The average tax liability in 2000 for lands within the Vanderwhacker Mountain Wild Forest averaged about $11.60 per acre, for a total of approximately $1,060,000. Annual payments made by the State for VMWF lands to each Town are approximated in the table below.

	VMWF acreage within Town	**approx. annual payment received from State for VMWF lands**
Minerva	51,010	$650,000
Newcomb	18,651	$183,000
North Hudson	8,383	$54,000
Schroon	7,498	$85,000
Chester	1,181	$28,000
Johnsburg	4,915	$58,000
Indian Lake	216	$2,500

Quantitative public use estimates and their economic impact for the Vanderwhacker Mountain Wild Forest are not available. Visitor-related expenditures contribute to the economy of the area. Tourism and outdoor recreation are a major portion of the area's economy.

4. Relationship to Adjacent State Lands

Vanderwhacker Mountain Wild Forest is not the only unit of state land in the area. As mentioned before, there are several Wilderness units, and other state lands in close proximity to the VMWF. Inherent in the classification of "Wilderness"are the many restrictions on allowable public uses and activities. Wild Forest areas are less fragile, ecologically, and consequently the resources in these areas can generally withstand more human impact. In addition, Wild Forest areas are generally more accessible to the public, with more roads reaching in to areas that might otherwise be difficult to access.

Although the Adirondack Mountain Reserve Easement (AMR), Samuel Bloomingdale Easement, and Upper Works Easement are located within the VMWF Planning Area, as shown on the VMWF UMP Map, they will not be addressed in this UMP. These easements do not border VMWF state lands, but rather have trail connections with and border the HPWA and DMWA. Thus, the easements have a far greater impact on the management of these two Wilderness Areas, and management actions relative to the easements are addressed in the HPWA and DMWA UMP's.

Wilderness Areas

The High Peaks, Hoffman Notch, and Siamese Ponds Wilderness Areas border Vanderwhacker Mountain Wild Forest. Area statistics are presented below.

High Peaks Wilderness Complex

State Lands	193,385	acres
Bodies of Water (117)	1,700	acres
Elevation (maximum)	5,344	feet
Foot Trails	303+	miles
Lean-tos	73	

The High Peaks Wilderness Area is the best known Wilderness in the Adirondacks and consequently receives the most visitation. The area contains many of New York's highest peaks including Mount Marcy at 5,344 feet. The HPWA is adjacent to the North River Mountains parcel of VMWF for approximately one mile, but there are no designated trail connections at this boundary. In addition, the HPWA is adjacent to VMWF for a short distance near the hamlet of Newcomb, and is in close proximity to VMWF in the vicinity of the Camp Santanoni Historic Area.

Hoffman Notch Wilderness

State Lands	36,231	acres
Bodies of Water (8)	156	acres
Elevation (maximum)	3,693	feet
Foot Trails	30	miles
Lean-tos	0	

Hoffman Notch Wilderness lies in the towns of Schroon, North Hudson, and Minerva in Essex County. Access to this Wilderness is easily gained, and its present use comes mainly from hikers, hunters and anglers. Of the three nearby Wilderness areas, it is the only one that shares a common boundary with VMWF for any great length. The Sand Pond Mountain parcel of VMWF contains the north end of the Hoffman Notch trail and borders the Wilderness area for approximately 4 miles. In addition, the Wilderness borders the VMWF almost uninterrupted in the vicinity of Minerva Stream and Cheney Pond for approximately 9 miles. However, with all this shared border, the only designated trail connection between the two units is the aforementioned Hoffman Notch trail.

Siamese Ponds Wilderness

State Lands	114,010	acres
Bodies of Water (80)	1,483	acres
Elevation (maximum)	3,472	feet
Foot Trails	80	miles
Lean-tos	4	

Siamese Ponds Wilderness is located in the towns of Lake Pleasant, Wells, and Indian Lake in Hamilton County and in the towns of Johnsburg and Thurman in Warren County. The Wilderness borders VMWF in the vicinity of Gore Mountain Intensive Use Are. There are opportunities, using existing and abandoned nordic ski trails, to create connections between Siamese Ponds Wilderness Area and VMWF, which will be addressed later in this plan.

Primitive Areas

Hudson Gorge

State Lands	17,170	acres
Bodies of Water (12)	283	acres
Elevation (maximum)	2,558	feet
Foot Trails	2.5	miles
Lean-tos	0	

The Hudson Gorge Primitive Area lies within the Town of Minerva in Essex County and the Town of Indian Lake in Hamilton County. It is separated from the VMWF on its northern boundary by the Northwoods Club Road and on its eastern boundary by the Hudson River. From many points within the VMWF, both on- and off-trail, it is possible to gain views of the gorge and surrounding mountains.

Intensive Use Areas

Lake Harris Campground

The campground is located on the north side of Lake Harris in the Town of Newcomb and is surrounded by VMWF lands. Currently, the only connection between the campground and VMWF is an existing foot trail that leads from the west end of the campground and across VMWF to the gatehouse complex at the Camp Santanoni Historic Area.

Eagle Point Campground and Scaroon Manor

Both campgrounds are located on the shore of Schroon Lake and separated from two parcels of VMWF by State Route 9 in the town of Chester in Warren County. Although the bordering pieces of VMWF are quite small, they may provide for additional family-based recreation opportunities, including hiking and bicycling. There are no existing designated trail connections to these VMWF parcels, but proposals relative to this can be found in Section IV of this document.

Other State-Owned and/or Operated Lands

Camp Santanoni Historic Area and Visitors Interpretive Center

The CSHA and the VIC (land leased from SUNY ESF) border the same parcel of the VMWF north of Lake Harris in the town of Newcomb. This plan identifies management alternatives on the VMWF to increase the public's use and enjoyment of all three areas.

Gore Mountain Ski Area and Little Gore (Little Gore is operated by the Town of Johnsburg)

GMSA is bordered by VMWF to the north and is connected to Little Gore via hiking and nordic ski trails. Sections of old trails and roads in the Raymond Brook drainage in VMWF can be re-opened to skiers and hikers and expanded to connect to existing nordic trails on Little Gore and even lead to the hamlet of North Creek.

G. Capacity to Withstand Use

The Vanderwhacker Mountain Wild Forest, like any other natural area in our Forest Preserve, cannot withstand ever-increasing, unlimited visitor use without suffering the eventual loss of its essential, natural character. This much is intuitive. What is not intuitive, though, is how much use and of what type the whole area - or any particular site or area within it - can withstand before the impacts of such use cause serious degradation of the very resource being sought after and used. Such is a wildland manager's most important and challenging responsibility, however: to work to ensure a natural area's "carrying capacity" is not exceeded while concurrently providing for visitor use and benefit.

The term “carrying capacity” has its roots in range and wildlife sciences. As defined in the range sciences, carrying capacity means “the maximum number of animals that can be grazed on a land unit for a specific period of time without inducing damage to the vegetation of related resources” (Arthur Carhart National Wilderness Training Center, 1994). This concept, in decades past, was modified to address recreational uses as well; although in its application to recreational use it has been shown to be significantly flawed when the outcome sought has been the “maximum number” of people who should visit and recreate in an area such as the Vanderwhacker Mountain Wild Forest. Much research has shown that the derivation of such a number is not useful.

Essentially, this is because the relationship between the amount of use and the resultant amount of impact is not linear (Krumpe and Stokes, 1993). For many types of activities, for instance, most of the impact occurs with only low levels of use. In the case of trail erosion, once soil starts to wash away, additional foot travel does not cause the impact upon the trail to increase proportionately. It has been discovered that visitor behavior, site resistance/resiliency, type of use, etc. may actually be more important in determining the amount of impact than the amount of use, although the total amount of use is still a factor (Hammit and Cole, 1987).

This makes the manager’s job much more involved than simply counting, redirecting, and (perhaps) restricting the number of visitors in an area. Influencing visitor behavior can require a well-planned, multi-faceted educational program. Determining site resistance/resiliency always requires research (often including much time, legwork and experimentation). Shaping the types of use impacting an area can call not only for education and research and development of facilities, but also the formulation and enforcement of a set of regulations which some users are likely to regard as objectionable.

Nevertheless, the shortcomings of a simple carrying capacity approach have become so apparent that the basic question has changed from the old one, “How many is too many?” to the new, more realistic one: “How much change is acceptable?” The DEC embraces this change in approach while recognizing the tasks it calls for in developing the best foundation for management actions. Professionally-informed judgements must be made such that carrying capacity is given definition in terms of resource and social conditions that are deemed acceptable; these conditions must be compared with the real, on-the-ground conditions; certain projections must be made; and management policies and actions must be drafted and enacted with an aim toward maintaining or restoring the conditions desired.

This shift in managers’ central focus - away from trying to determine how many visitors an area can accommodate to trying to determine what changes are occurring in the area and whether or not they are acceptable - is as critical in a Wild Forest area like the Vanderwhacker Mountain Wild Forest as it is in a Wilderness. All such areas are State Forest Preserve units which must be protected, per the state Constitution, as “forever wild.” Furthermore, the APSLMP dictates in the very definition of Wild Forest areas that their “essentially wild character” be retained.

The magnitude of the challenge here is made evident by other statements and acknowledgments found in the APSLMP concerning Wild Forest areas. The 1972 APSLMP claim that “[m]any of these areas are under-utilized” remains seemingly true, and from this determination and the determination that these areas “are generally less fragile, ecologically” comes a directive that “these areas should accommodate much of the future use of the Adirondack forest preserve.”

Clearly, a delicate balancing act is called for, and yet just as clearly, the Department’s management focus must remain on protecting the resource. “Future use” is not quantified in the above directive, but it is generally quantified and characterized in the definition of Wild Forest as only “a somewhat higher degree of human use” when compared to Wilderness. And whereas certain “types of outdoor recreation...

should be encouraged," they must fall "[w]ithin constitutional constraints... without destroying the wild forest character or natural resource quality" of the area.

A central objective of this plan is to lay out a strategy for achieving such a balance in the Vanderwhacker Mountain Wild Forest. This strategy reflects important guidelines and principles, and it - along with the guidelines and principles - have directed the development of the management proposals which are detailed in Section IV.

Strategy

The long-term strategy for managing the Vanderwhacker Mountain Wild Forest uses a combination of three generally accepted planning methods: (1) the goal-achievement process; (2) the Limits of Acceptable Change (LAC) model employed by the U.S. Forest Service; and (3) the Visitor Experience and Resource Protection (VERP) model employed by the National Park Service. Given the distinctly different, yet important purposes of these methods (particularly between the first method and the second two), there are clear benefits offered by employing a blend of these approaches here.

Goal-Achievement Process

The goal-achievement process provides a framework for proposed management by means of the careful, stepwise development of key objectives and actions that serve to prescribe the Wild Forest conditions (goals) outlined by APSLMP guidelines. DEC is mandated by law to devise and employ practices that will attain these goals. For each management activity category included in Section IV of this plan, there has been worked up a written assessment of the current management situation and a set of assumptions about future trends, in which the specific management proposals which follow are rooted.

Limits of Acceptable Change (LAC) and Visitor Experience and Resources Protection (VERP) Models

These methods both employ carrying capacity concepts, not as prescriptions of the total number of people who can visit an area, but as prescriptions of the desired resource and social conditions that should be maintained to minimum standards regardless of use.

Establishing and maintaining acceptable conditions depends on well-crafted management objectives which are explicit and which draw on managerial experience, research, inventory data, assessments and projections, public input, and common sense. When devised in this manner, objectives founded in the LAC and VERP models essentially dictate how much change will be allowed (or encouraged) to occur and where, as well as how management will respond to changes. Indicators (measurable variables that reflect conditions) are chosen, and standards (representing the bounds of acceptable conditions) are set, all so that management efforts can be effective in addressing unacceptable changes. A particular standard may be chosen so as to act as a simple trigger for management action (as in VERP), or it may be chosen to act as a kind of boundary which - given certain assessments - allows for management action before conditions deteriorate to the point of no longer meeting the standard (as in LAC).

Even well-conceived and executed efforts can prove ineffective, but when this is the case, management responses must be adjusted. Monitoring of resource and social conditions is absolutely critical. Both the LAC and VERP models rely on monitoring to provide systematic and periodic feedback to managers concerning specific conditions. However, since the VERP model was developed to apply only to impacts from visitor use, some management issues (for instance, the impacts of acid deposition) call for an approach that is properly in the LAC vein.

Since differences between LAC and VERP are not significant, choices are left up to managers. These choices are as evident as they need to be wherever this plan, in Section IV, calls for sets of management actions which incorporate them.

In outline, DEC's approach applies four factors in identifying potential management actions for an area:

- The identification of acceptable resource and social conditions as defined by measurable indicators;
- An analysis of the relationship between existing conditions and those desired;
- Determinations of the necessary management actions needed to achieve desired conditions; and,
- A monitoring program to see if objectives are being met.

A list of indicators which may be used by the DEC for measuring and evaluating acceptable change are:

- Condition of vegetation in camping areas and riparian areas near lakes and streams;
- Extent of soil erosion on trails and at campsites;
- Noncompliant behavior;
- Conflicts between different user groups;
- Air and water quality.

These indicators form the basis for the proposed management actions presented in Section IV. Each applicable resource area or facility type identified in Section IV will be assessed for it's present condition, it's desired future condition and how it will be measured. This approach will require flexibility, determination and patience. It may not be possible to complete all inventories and assessments called for by this strategy - and by the APSLMP - in this plan's five-year time frame. It will be important to show progress in achieving APSLMP goals and in gaining initial managerial experience and knowledge in applying this strategy to some carrying capacity questions and issues. Knowledge gained as a result of the implementation of this first Vanderwhacker Mountain Wild Forest unit management plan will be useful to: 1) revising and refining management actions if evaluation shows that desired conditions are not being attained or sustained; and 2) creating a foundation upon which this strategy can eventually be built into a fully-developed, science-based approach to protecting and managing the unique resources of the Vanderwhacker Mountain Wild Forest.

A. <u>Land Resources</u>

The land resource may be impacted from overuse or inappropriate use and can result in soil degradation, litter, disturbance to fragile vegetation and aesthetic impacts. The marking and clearing of unofficial trails, overuse from camping, and illegal motor vehicle use all negatively impact land resources.

In general, the level of human use of the VMWF does not appear to impact the natural resources of the unit beyond its capacity to withstand recreational use. The VMWF exhibits few of the overuse parameters experienced in the nearby and highly overused areas of the HPWA. This is likely due, in large part, to the decidedly lesser number of primary attraction points (summits, lakes, ponds, interior structures) in the unit and to low public knowledge of and familiarity with the VMWF. Much of the visitor use appears to be either day trips or short-term overnights. Moderate levels of soil erosion and compaction are evident mainly on the most popular trails; the Vanderwhacker Mountain trail and the Stony Pond trail. Primitive tent sites along Northwoods Club Road at the Boreas River locally show signs of soil compaction and erosion, which is severe in some instances.

Physical inspections of the trails and campsites in the VMWF coupled with user feedback provide the following observations with respect to the capacity of the natural resources of the unit to withstand recreational use:

- Primitive tent sites along Northwoods Club Road at the Boreas River are heavily-used during summer weekends. The resultant impacts include trampling of vegetation, as well as soil erosion and compaction.
- Inappropriate motor vehicle use at Muller Pond has resulted in impacts to vegetation and soil. A non-designated campsite located too close to the pond has become a party spot, resulting in vandalism and littering.
- Poor original layout of the Vanderwhacker Mountain tower trail results in a low capacity of that trail to withstand use, evidenced by areas of erosion and gullying along the trail. The trail re-route proposed later in this plan should alleviate this problem and ensure that its capacity to withstand use is not exceeded.
- The majority of primitive tent sites in the unit appear to be long established. Most appear to be fairly well self contained.

B. Fish and Wildlife Resources

Wildlife use in the Vanderwhacker Mountain Wild Forest ranges from hunting and trapping to organized bird watching to casual observation. Consumptive uses (i.e., the taking of game species) are strictly regulated by the Department. Regulations are designed to perpetuate the wildlife resource and make it available for future generations. Hunting and trapping can influence the populations of some species such as white-tailed deer, black bear, beaver, fisher, and otter. Annual review of harvest levels insures that overharvest of these species does not occur. Harvest of many species is reviewed annually through hunter checks, pelt sealing, or mail survey. As a result of management and large areas that serve as "reservoirs", all game species in the Adirondacks have substantial populations with the ability to withstand annual harvest.

Nearly all species of wildlife are protected or their harvest carefully regulated. The degree and type of public use within the unit does not appear to have a significant impact on the wildlife resource.

DEC angling regulations are designed to conserve fish populations in individual waters by preventing over-exploitation. Angling regulations effectively control impacts of angler use. DEC monitors the effectiveness of angling regulations, stocking policies, and impacts of other management activities by conducting periodic biological and chemical surveys. Based on analysis of biological survey results, angling regulations may be changed as necessary to protect the fish populations of the Vanderwhacker Mountain Wild Forest area. Statewide angling and special angling regulations provide the protection necessary to sustain or enhance natural reproduction where it occurs.

In addition to angling regulations, factors at work in the unit, which serve to limit use, include the relative remoteness of ponds and streams from roads (with some exceptions) and the seasonal nature of angling in coldwater ponds. Because angler use of streams in the unit is believed to be light, the brook trout populations which they support can sustain anticipated regulated harvest levels without damaging their capacity to maintain themselves naturally. The warmwater game fish species found in the unit also have proven their ability to maintain themselves under existing regulations without the need for stocking.

When necessary, populations of coldwater gamefishes are maintained or augmented by DEC's annual stocking program. Most warmwater species (smallmouth bass, largemouth bass, northern pike and panfishes) are maintained by natural reproduction; however, stocking is sometimes used to introduce those fishes to waters where they do not exist.

H. Scientific Research

The ALSC has conducted research on waters within and in relatively close proximity to VMWF (see Section II. 1. A. g. Air Resources and Atmospheric Deposition and Appendix B for more details). DEC is unable to carry out all the research from which VMWF would benefit, for numerous reasons. Therefore, DEC encourages private organizations to do so, where possible. Research projects are initiated by a written proposal submitted to the DEC Region 5 Regional Forester in Ray Brook. Following a review process, written authorization in the form of a Temporary Revocable Permit (TRP) is issued. The permit specifies the conditions upon which approval is contingent. Researchers are required to report to DEC in writing on the findings of each research program. In some cases scientific research permits may be jointly issued by the Department and the New York State Museum. Such a permit is required when any scientific collections are made on State land.

Over the past several years a number TRP's have been issued for activities within and around the unit. These activities have included research in a wide variety of areas, including acid deposition, entomology and forest health, wildlife management, recreation management, forest ecology. On-going projects include the installation and remeasurement of so-called FIA plots (Forest Inventory and Analysis) by US Forest Service staff.

SECTION III. MANAGEMENT AND POLICY OVERVIEW

A. Past Management

The administration of Forest Preserve land is the responsibility of the Division of Lands and Forests. The responsibility for the enforcement of DEC rules and regulations lies with the Office of Public Protection. The Division of Operations conducts interior construction, maintenance and rehabilitation projects. The Bureau of Recreation within the Division of Operations operates and manages the public campgrounds adjacent to the unit. The Division of Fish, Wildlife and Marine Resources manages the state's fish and wildlife resources.

Most management activities in VMWF in the past have focused on fire protection and public uses, such as hunting, fishing and recreation. The fire tower on Vanderwhacker Mountain was built of wood in 1911, replaced with a steel tower in 1918, and operated until the mid '80s. The observer's cabins, the newer of which was built in the '50s, are a mile and a half walk from the tower. There is another Ranger cabin (presumably built in the 1920's or 1930's) located on the unit which has been used at various times as outpost, storage facility, and site for public education.

In addition, the relatively small network of trails, given the overall size of VMWF, consists mostly of abandoned roads used for public and private travel in years gone by. Many of these trails lead to popular fishing, hunting and vista locations, and consequently have remained as designated trails.

In the '30s, the Civilian Conservation Corps (CCC) was responsible for establishing Norway spruce, Scots pine, and white pine plantations on the unit on burned over areas and abandoned farmland acquired by the state for back taxes. Examples of such plantations can be seen in the vicinity of the Roosevelt truck trail, Charley Hollow Road, and Muller Pond, as well as many other places on the unit.

Land Management

Besides the aforementioned trail up Vanderwhacker Mountain, there are only a few other non-snowmobile trails in VMWF. Maintenance of these trails generally has included annual blowdown removal and periodic drainage work. A few trails received maintenance in the form of blowdown removal performed by localities via Temporary Revocable Permits (TRP), such as the Town of Johnsburg's minor maintenance of the trails at Little Gore that pass through VMWF for short distances. Other trails, such as the Roosevelt Truck Trail, are kept open by skiers, hunters, and other recreationists. The known history of these trails and roads in the unit was discussed earlier in this document. Snowmobiling is another public activity which has taken place in VMWF over the years, as evidenced by the designation of a handful of snowmobile trails on the unit. Over the last thirty years, management activities have concentrated mainly on brushing and blowdown removal. The Department currently holds no ANRSA's or TRP's with local snowmobile clubs to maintain or groom any trails in VMWF. At times of deep snow, these ungroomed trails may become impassable to snowmobiles. A description of the past management of snowmobile trails in the VMWF is discussed below.

The Vanderwhacker Snowmobile Trail is an old jeep trail that runs from Chaisson Road in Newcomb across ½ mile of private land and onto VMWF. Initially, it snakes through an area of eskers and wetlands before it heads around the west side of Vanderwhacker Mountain and connects with Moose Pond Road in Minerva. Although the trail was not formally closed, little, if any, DEC trail maintenance had occurred there for over 20 years. As a result, the trail had become overgrown in many places. In 1998, the Town of Newcomb applied for and was issued a Temporary Revocable Permit (TRP) from DEC to conduct maintenance work on the trail. The Town of Newcomb hired a private contractor to undertake the work. DEC personnel were assigned to the area, but were not present the entire time work was being performed. During this work, disturbance/filling of wetlands and clearing of trees and vegetation was

effected and 14 separate wetland violations were subsequently identified. A settlement agreement was reached between the APA and DEC to remediate the 14 wetland sites and close the trail to public snowmobile use until a UMP makes a determination on future trail use. The remediation work included: removing fill from wetlands and replacing in adjacent borrow pits, removing culverts, re-establishing stream channels, and seeding and mulching. This work was undertaken in spring 2000 by Ameri-corps volunteers and DEC Operations staff and completed that summer.

The snowmobile trail connecting Cheney Pond to Irishtown has also received only minor maintenance from DEC over the years. The dam on the Boreas River at Lester Flow has not been used in the driving of logs since 1949 and consequently was breached shortly thereafter. Since that time, the trail has crossed the frozen flow just north of the dam and connected with the old road running between the Blue Ridge Road and Irishtown. The trail has seen more use at its southern end because of the private inholding there. Consequently, the owners of the inholding have likely performed minor maintenance on the state-owned portions of the trail, such as clearing blowdown.

A third snowmobile trail (Stony Pond Snowmobile Trail) on VMWF runs between Route 28N near Stony Pond and Irishtown. This trail is one of the more popular trails on the unit, because of the lean-to on the west shore of the pond, and consequently has seen more maintenance by the Department than the above mentioned trails. At its southern end, the trail leads to a private inholding and near an old mine, which accounts for its width and condition at this end. However, the middle portion of the trail is not well-used; the section alongside Big Sherman and Little Sherman Ponds. Snowmobilers often travel across the frozen ponds rather than use the trail. Consequently, the trail along the ponds is somewhat overgrown and can likely be quite difficult to traverse by snowmobile.

The Linsey Marsh trail, which is isolated, short, and dead-ends, has also been used as a snowmobile trail over the years, and appeared in DEC publications as such before 1972 and as recently as 1989. Precise snowmobile use data for this trail is not available, but observations by the local Forest Ranger indicate that the trail has seen very little use over the last ten years and no use in the last three years. DEC Policy ONR-2 (Snowmobile Trails - Forest Preserve) encourages the Department to close such trails. This proposal will be discussed more fully in Section IV Management Recommendations. In years gone by, the trail into Linsey Marsh was more popular with the public, perhaps as a hunting spot and because of a tent platform located along the trail not far from the marsh. The trail and platform were also used in the winter, for the scenic and wildlife viewing opportunities from the frozen marsh. However, the platform was a non-conforming structure under the APSLMP, and was removed in the 1970's. In recent years, use and maintenance of this trail has dwindled considerably (personal communication - FR G. Roberts).

There are several old wagon roads in the Town of Newcomb that briefly cross lands of the VMWF, and access private lands along the Hudson River, south of Route 28N. Some of these old roads, such as the Packbasket trail, appeared on old Conservation Department maps as snowmobile trails. However, these trails were closed many years ago and have been posted against snowmobile use for some time.

There is also a network of snowmobile trails in Schroon Lake that cross VMWF intermittently. Much of this land came into state ownership in the early and mid-twentieth century and consequently, many of these trails are along old roads, portions of which haven’t seen regular automobile traffic for 30 years. In the 1960's, DEC’s predecessor, the Conservation Department, worked with the Town and local snowmobile club in the development of the network. In fact, the trail leading south from Horseshoe Pond Road to Charley Hill Road was partially built by the Conservation Department. A more detailed description of this network can be found in Appendix G.

In the 1960's, the Conservation Department entertained the idea of establishing a state campground on Cheney Pond. In order to make the campground more attractive, the State determined it would need to

manipulate Lester Dam and control the water level in the pond. By this time, the dam had not been used for river-driving for some years and had consequently fallen into disrepair. A second benefit to repairing the dam would have been in controlling water levels downstream, consequently enhancing fish habitat in the Boreas River. For this reason, the State also considered much-needed repair to Brace Dam further upstream. However, in the settlement for Township 30, Finch, Pruyn & Company, Inc. had retained sole right to maintain these dams. In 1967, Finch, Pruyn & Company, Inc. agreed to share these rights with the State temporarily and repair the LaBier Dam and Boreas Ponds Dam located on private land further upstream along the Boreas, if the State repaired Lester Dam and Brace Dam within four years. The money for repair of the dams on state land was never allocated and eventually the flowage rights reverted back to Finch, Pruyn & Company, Inc.

Wildlife Management

A number of changes have occurred over the past several decades that have impacted a variety of wildlife species within VMWF. Habitat changes have resulted from pre-Forest Preserve logging, wild fires, acid precipitation, recreation uses, natural plant succession, protection of the forest and wildlife species through legislation, reintroduction of extirpated species of wildlife and immigration of extirpated species to the area. Most wildlife management activities have been directed at improving knowledge of the wildlife species and populations on a larger scale or landscape and not specifically within the confines of VMWF itself. Wildlife management is not governed by this plan or by Forest Preserve "units" as outlined in the APSLMP. For example, deer management is based on Wildlife Management Unit (WMU) objectives. The Vanderwhacker Mountain Wild Forest lies within WMU's 5H, 5F and 5G.

Wildlife management activities have generally included:

- survey of selected wildlife species and various wildlife populations using a variety of techniques including aerial and on-the-ground-field-work, wildlife atlasing and reports from the public to document the presence or absence of species and population trends;
- monitoring of the harvest of and collecting biological information on selected wildlife species that are hunted and trapped to monitor changes in populations and guard against overharvest of potentially vulnerable species (e.g., otter, fisher and marten). (Records of furbearer, deer and bear take are listed in Appendix E); and,
- re-establishment of self-sustaining wildlife populations of species that are extirpated, endangered, threatened or of special concern in habitats where their existence will be compatible with other elements of the ecosystem and human use of the area.

Fisheries Management

Fish management in the Vanderwhacker Mountain Wild Forest has emphasized brook trout, brown trout, largemouth bass, smallmouth bass and various panfishes. Eleven ponds have been managed solely for brook trout. Area waters generally are subject to statewide angling regulations, with the exception that the use of fish as bait is prohibited in selected waters.

Historical biological data is available for all ponded waters in the unit excluding 23 waters that are either small or are contiguous with waters where survey data is available. Appendix B (page 125) presents pond-specific survey and management data for ponds in the unit. Little active fishery management has been conducted on streams within the unit because of their remoteness and small size. However, certain accessible streams, the Boreas River in particular, have been stocked with brook, brown, and rainbow trout.

B. Special Management Areas

The Adirondack Park State Land Master Plan recognizes two Special Management Areas within Vanderwhacker Mountain Wild Forest. Per the APSLMP, management of these lands will not be less restrictive than that of the major land classification in which they lie.

Vanderwhacker Mountain Summit

Vanderwhacker Mountain is one of the highest mountains in the unit at 3,386 feet. Views from the fire tower at the summit are spectacular. For that reason, the summit of the mountain is listed as a Scenic Special Management Area in the APSLMP. In addition, the fire tower is listed as a National Historic Landmark. Actions proposed in this UMP relating to the summit include the formation of the Friends of Vanderwhacker group and any subsequent work they may undertake to restore and rehabilitate the tower and associated facilities. Such work will be overseen by the Department and administered through an Adopt-a-Natural-Resource Agreement. Management actions in the area will focus on protecting the ecological, scenic, and historical characteristics of the summit and providing a worthwhile educational experience to the public. See Section IV Management Recommendations for further discussion of management activities on and around the summit area.

Boreas Hardwoods

This area (see map, Appendix H) is located on the east side of the Boreas River and is listed in the APSLMP as a Natural Special Management Area. The area is roughly 500 acres in size and is illustrative of a large-diameter, mature Northern Hardwoods community. The Northwoods Club Road runs through the area, as does a 0.75 mile woods road (a.k.a. "Lot 118 woods road") leading to a private inholding to the north. Actions considered in this UMP relating to this area include the alternative route that calls for designating the woods road as part of a snowmobile trail to facilitate access between Newcomb and Minerva. (See Appendix I).

C. Management Guidelines

1. Guiding Documents

This unit management plan has been developed within the guidelines set forth by:

- Article XIV, Section 1 of the New York State Constitution;
- New York State Environmental Conservation Law Article 9 and Title 6 of the New York State Code of Rules and Regulations (NYCRR) Parts 190-199;
- Wild Forest guidelines set forth in the APSLMP;
- ECL Article 15, Title 27 and Regulations for Administration and Management of the Wild, Scenic, and Recreational Rivers System in New York State (6 NYCRR Part 666), in particular referring to 11.5 miles of the Boreas River classified as "scenic", 2 miles of the Hudson River classified as "recreational", and 3.5 miles of the Hudson classified "scenic";
- ECL Article 9-0107(2) (Silvicultural Research Lands);
- established Department policy.

Article XIV, Section 1 of the New York State Constitution provides in part that, "[t]he lands of the State, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed."

The APSLMP provides guidance for the use and management of lands which it classifies as "Wild Forest" by establishing basic guidelines. The APSLMP defines Wild Forest as:

...an area where the resources permit a somewhat higher degree of human

use than in wilderness, primitive or canoe areas, while retaining an essentially wild character. A wild forest area is further defined as an area that frequently lacks the sense of remoteness of wilderness, primitive or canoe areas and that permits a wide variety of outdoor recreation.

APSLMP guidelines define acceptable limits for the management and/or use of structures and improvements, ranger stations, motor vehicles, motorized equipment and aircraft, all terrain bicycles, roads, jeep trails, truck trails, snowmobile trails, fire towers, tent platforms, fishing and waterway access sites, flora and fauna, and recreational use and overuse. APSLMP management guidelines for Wild Forest are listed in Appendix M.

It is important to understand that the State Land Master Plan has structured the responsibilities of the Department and the Agency in the management of State lands within the Adirondack Park. Specifically, the APSLMP states that:

"..... the legislature has established a two-tiered structure regarding state lands in the Adirondack Park. The Agency is responsible for long range planning and the establishment of basic policy for state lands in the Park, in consultation with the Department of Environmental Conservation. Via the master plan, the Agency has the authority to establish general guidelines and criteria for the management of state lands, subject, of course, to the approval of the Governor. On the other hand, the Department of Environmental Conservation and other state agencies with respect to the more modest acreage of land under their jurisdictions, have responsibility for the administration and management of these lands in compliance with the guidelines and criteria laid down by the master plan."

In order to put the implementation of the guidelines and criteria set forth in the APSLMP into actual practice, the DEC and APA have jointly signed a Memorandum of Understanding concerning the implementation of the State Land Master Plan for the Adirondack Park. The document defines the roles and responsibilities of the two agencies, outlines procedures for coordination and communication, defines a process for the revision of the APSLMP, as well as outlines procedures for State land classification, the review of UMPs, state land project management, and state land activity compliance. The MOU also outlines a process for the interpretation of the APSLMP.

DEC policy has been developed for the public use and administration of Forest Preserve lands. Select policies, guidance, and maintenance standards relevant to the management of this unit include:

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17)
- Motor Vehicle Access to State Lands Under the Jurisdiction of DEC for People with Disabilities (CP-3)
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1)
- Tree Cutting on Forest Preserve Land (O&D #84-06)
- Cutting and Removal of Trees in the Forest Preserve (LF-91-2)
- Snowmobile Trails - Forest Preserve (ONR-2)
- Interim Guidelines for Snowmobile Trail Construction and Maintenance in the Adirondack Forest Preserve (11/15/00)
- Division Regulatory Policy (LF-90-2)
- Adopt-A-Natural Resource (ONR-1)
- Policies and Procedures Manual Title 8400 - Public Land Management.

The Department also maintains policy to provide guidelines for the design, location, siting, size, classification, construction, maintenance, reconstruction and/or rehabilitation of dams, fireplaces, fire rings, foot bridges, foot trails, primitive camping sites, road barriers, sanitary facilities and trailheads. Other

guidelines used in the administration of Forest Preserve lands are provided through Attorney General Opinions, Department policy memos, and Regional operating procedures.

The recommendations presented in this unit management plan are subject to the requirements of the State Environmental Quality and Review Act of 1975. All proposed management activities have been reviewed and significant environmental impacts and alternatives have been assessed.

2. Guidelines

In addition to formal guidelines, the Department will adhere to certain standards for the development of management objectives and subsequent actions. The following guideline standards will apply to the construction, maintenance, rehabilitation and existence of all facilities within the Vanderwhacker Mountain Wild Forest:

Trails
Trails to be designated and constructed will increase the access, enjoyment, and understanding of these lands. In locating trails, preference will be given to places where the land through which the trail passes or the destination of the trail has high scenic, ecological, or historical interest. All trail construction and relocation projects will be developed in accordance with the Adirondack Park State Land Master Plan, and will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or clear or partially cleared areas;
- Locating trails away from streams, wetlands, and unstable slopes wherever possible;
- Use of proper drainage devices such as water bars and broad-based dips;
- Locating trails to minimize grade;
- Using stream crossings with low, stable banks, firm stream bottom and gentle approach slopes;
- Constructing stream crossings at right angles to the stream;
- Limiting stream crossing construction to periods of low or normal flow;
- Using stream bank stabilizing structures made of natural materials such as rock or wooden timbers;
- Using natural materials to blend the structure into the natural surroundings;
- Accessibility to those with disabilities.

Trails will be easily identified from the road/trailhead, clearly marked, and well maintained. Sufficient parking will be provided at the trailhead to accommodate anticipated use and in accordance with that area's resource capacity to withstand use. Where possible, trails will be developed and maintained in partnership with local governments, organizations, and residents.

The Vanderwhacker Mountain Wild Forest will be linked with nearby communities and trail systems through trail connections where feasible, appropriate, and supported by local governments, residents, and landowners. Priority will be given to trail linkages that tie into existing public transportation, reduce the need for new structures and improvements within the unit, support local economic development plans, and foster the development of interpretive and educational programs.

Conflicts between different types of trail use will be minimized, and if necessary, use will be separated. Often, separating use occurs with the changing season (e.g. snowmobiling and mountain bicycling). If demand exists for a type of trail use in an area where it is appropriate but cannot be separated from other trail uses, the use will be allowed on existing trails where shared use will not lead to unacceptable conflicts between trail users or unacceptable physical impacts. On shared-use trails, the Department will

inform visitors about the types of trail uses allowed and will promote the principles of trail-sharing etiquette through trailhead signs and publications. Trail use will be monitored. Should monitoring reveal that the addition of a new type of trail use has caused unacceptable levels of conflict between trail users or unacceptable physical impacts to a trail, appropriate action will be taken to reduce such conflicts or impacts. Action may include elimination of a type of trail use from the trail.

Where appropriate, development of long-distance trails that cross management units and DEC regions will be encouraged. Routes of long-distance trails will incorporate existing trails where feasible and appropriate. However, long-distance trails will not be located where anticipated levels of use on new or existing trails or increased access to adjacent areas will have unacceptable impacts on natural resources, the recreational experiences of visitors, or lands outside the Forest Preserve. Because most long-distance trails cross both public and private lands, the Area Manager will coordinate with private landowners, the managers of other involved public lands and trail organizations in the development and management of long-distance trails.

The Area Manager may close trails at any time when necessary to protect natural resources or the safety of the public.

Trailheads and Parking Areas

Points of access throughout the unit provide valuable locations for providing information and orienting visitors. Visitors receive their first impression of the area from the nature and condition of the trailhead/parking facility. For highway travelers, trailheads and/or parking areas are often the only indication that they are passing through public lands. Access points also provide trailhead registration data that can be utilized in quantifying the public's use of a particular area, and for providing crucial information that may assist in search and rescue operations. Accordingly, DEC will consider the design and maintenance of trailheads, fishing access sites and general access parking areas a matter of prime importance.

Trailhead designs will be standardized to allow visitors to identify the many separate parcels of the Forest Preserve as parts of a single entity and provide complete information in a consistent format. A limited number of standard designs will be developed to make necessary information available to visitors, provide a trail register where needed, and eliminate the problems of supplementary signs and informational clutter.

All parking lot construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating parking lots to minimize necessary cut and fill;
- Locating parking lots away from streams, wetlands, and unstable slopes wherever possible;
- Locating parking lots on flat, stable, well-drained sites;
- Using gravel or other appropriate materials to avoid runoff and erosion problems;
- Locating parking lots in areas that require a minimum amount of tree cutting;
- Limiting construction to periods of low or normal rainfall;
- Wherever possible, using wooded buffers to screen parking lots from roads;
- Limiting the size of the parking lot to the minimum necessary to address the intended use.

Lean-tos and Campsites

All lean-to construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating lean-tos and campsites to minimize necessary cut and fill;
- Locating lean-tos and campsites to minimize tree cutting;

- Locating lean-tos and campsites away from streams, wetlands, and unstable slopes;
- Use of drainage structures on trails leading to lean-to sites and campsites, to prevent water flowing into site;
- Locating lean-tos and campsites on flat, stable, well-drained sites;
- Limiting construction to periods of low or normal rainfall.

General Construction

All construction projects will be developed in accordance with the Adirondack Park State Land Master Plan, and will incorporate the use of Best Management Practices, including such considerations as:

- Locating improvements to minimize necessary cut and fill;
- Locating improvements away from streams, wetlands, and unstable slopes;
- Use of proper drainage devices such as water bars and broad-based dips;
- Locating trails to minimize grade;
- Using stream crossings with low, stable banks, firm stream bottom and gentle approach slopes;
- Constructing stream crossings at right angles to the stream;
- Limiting stream crossing construction to periods of low or normal flow;
- Avoiding areas where habitats of threatened and endangered species are known to exist;
- Using natural materials to blend the structure into the natural surroundings;
- Reducing or eliminating the introduction and spread of invasive species.

Directional and Informational Signs

The Department produces and posts a variety of signs that provide information about regulations, recommendations, directions and distances to destinations, and resource conditions to those who visit the unit. These signs are posted at trailheads as well as interior locations.

To maintain a consistent and recognizable appearance, the dimensions, materials, colors, and wording of DEC signs will be standardized. To ensure the public's ability to locate the unit's lands and facilities easily, the following guidelines will apply to the design and erection of signs:

- All roadside directional signs, trailhead identification signs and interior guide boards will be made of wood and will be brown with yellow lettering.
- Informational "posters" may be made of metal or plastic and generally will be brown with yellow lettering, although other unobtrusive color combinations may be used, such as yellow or white with dark green lettering, or white with black lettering. Posters or signs intended to draw attention to obstacles or hazardous conditions may be red and white.
- Lettering clearly indicating the unit name and classification; "Vanderwhacker Mountain Wild Forest", will be given in all roadside directional signs and trailhead identification signs.
- Standard boundary signs indicating the Wild Forest classification will be posted every one-tenth mile along all highways that pass through or adjacent to the unit and at other strategic locations, such as points on trails where they pass from private onto state lands.
- All signs removed through vandalism or other causes will be promptly replaced.
- Signs will carry a positive message. Rather than simply citing a regulation, a sign should explain the reasons behind the message.
- Managers will use the smallest number of signs necessary to accomplish an informational or regulatory objective.
- Signs will be clustered on a single sign post or bulletin board placed where they are most likely to be seen by visitors.
- The posting of signs by all DEC divisions will be coordinated through the Area Manager.

- As a general rule, informational signs will be posted on the periphery of a management unit rather than in the interior.
- Signs will be constructed of rustic materials and will be limited in number.
- Only signs that conform to Department rules and regulations and policy will be placed within the unit.

Design Standards

It is useful and desirable to have consistent design standards for all Forest Preserve facilities, structures and improvements. This assists users in quickly recognizing state facilities and obtaining information on services, destinations, etc. Forest Preserve design standards will be developed. Since no formal Forest Preserve design standards exist at this time, the Area Manager will refer to existing documents such as the "Interior Use Manual" and the "Adirondack lean-to plan," when designing or rehabilitating structures. If no specific guidance is available for a structure, it will be designed to incorporate the use of natural materials such as round wood, wood shingles and native stone. The appearance of structures within the unit will conform to the natural environment through the use of colors such as subdued greens, browns and other "earthtones."

Fish and Wildlife Management

Most visitors to the unit observe wildlife incidentally to other activities they may be pursuing. Others are concerned specifically with viewing or pursuing wildlife.

Big game hunters are one of the primary users of the area during the big game hunting seasons. Access for hunting is obtained at trailheads, roadside parking areas, permitted camping areas and from adjacent private property. Trapping is also seasonally popular in the unit.

Wildlife use and observation will be encouraged by maintaining and improving access where appropriate. The Department will support and encourage the traditional use of wildlife resources, particularly hunting and trapping, and will promote and encourage non-consumptive uses such as bird watching and wildlife photography. Population monitoring and research, particularly that associated with the protection of rare, threatened and endangered species, and the management of game populations will be supported.

Fisheries management occasionally requires reclamation. Reclamation is a management technique that involves the application of a fish toxicant (rotenone) to eliminate non-native and/or competing fishes. Upon detoxification, reclaimed waters are generally restocked with brook trout and/or rainbow trout. Natural or artificial barriers which block movement of fish into reclaimed waters are critical to prevent the reintroduction of non-native fishes. Ponds will be reclaimed only if there is no outlet, if a natural or man-made fish barrier is present, or if a fish barrier can be constructed prior to reclamation. Fish barrier dams will be constructed as necessary on the outlets of ponded waters scheduled for reclamation.

All fish stocking projects will be in compliance with the Programmatic Environmental Impact Statement on Fish Species Management Activities of the New York State Department of Environmental Conservation, dated December 1979. All liming projects will be in compliance with the Final Generic Environmental Impact Statement on the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters, dated October 1990, as well as the Division of Fish, Wildlife and Marine Resources liming policy.

Fishing, trapping and hunting is authorized by Article 11 of the Environmental Conservation Law and regulated by Title 6 of NYCRR, Chapter 1, Parts 1-188. The Code of Federal Regulations provides additional regulatory guidance.

Linking Management Units

The Vanderwhacker Mountain Wild Forest abuts other Forest Preserve lands that have a variety of classifications. Lands classified as Wilderness, Primitive and Intensive Use all surround the unit. Of particular note in relation to the development of facilities, are the Intensive Use Areas and the Historic Area. These public lands are easily accessible parts of the Forest Preserve that annually attract tens of thousands of visitors. Although the recreational potential of these facilities has been developed to a considerable extent, additional opportunities exist. Short trails to scenic locations, loop trails for mountain bicycles, and interpretive trails can make a family campground visit more enjoyable. These opportunities can also facilitate access for persons with disabilities. Access points provided in surrounding campgrounds bring the surrounding Wild Forest closer to the visitor.

New facilities must be carefully designed and constructed so as not to compromise existing facilities. For example, providing free primitive camping opportunities adjacent to an Intensive Use Area could negatively impact the experience of campers staying at the campground, and could also have serious detrimental effects on the natural resources of the immediate area. Also, measures will be considered to ensure that protections specific to each unit's classification are maintained. The linking of management units will be complementary and improve the service and opportunities available to a broad variety of users.

The Americans with Disabilities Act and Its Influence on Management Actions for Recreation and Related Facilities

The Americans with Disabilities Act (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973; Title V, Section 504, have had a profound effect on the manner by which people with disabilities are afforded equality in their recreational pursuits. The ADA is a comprehensive law prohibiting discrimination against people with disabilities in employment practices, use of public transportation, use of telecommunication facilities and use of public accommodations. Title II of the ADA applies to the Department and requires, in part, that reasonable modifications must be made to its services and programs, so that when those services and programs are viewed in their entirety, they are readily accessible to and usable by people with disabilities. This must be done unless such modification would result in a fundamental alteration in the nature of the service, program or activity or an undue financial or administrative burden to the Department. Since recreation is an acknowledged public accommodation program of the Department, and there are services and activities associated with that program, the Department has the mandated obligation to comply with the ADA, Title II and ADA Accessibility Guidelines, as well as Section 504 of the Rehabilitation Act.

The ADA requires a public entity to examine thoroughly, each of its programs and services to determine the level of accessibility provided. The examination involves the identification of all existing programs and services and a formal assessment to determine the degree of accessibility provided to each. The assessment includes the use of the standards established by Federal Department of Justice Rule as delineated by the Americans with Disabilities Act Accessibility Guidelines (ADAAG, either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. Each Unit Management Plan prepared by the Department will outline a proposed assessment process and a schedule for completing the assessment. This activity is dependent on obtaining an inventory of all the recreational facilities or assets supporting the programs and services available on the unit. The assessment will also establish the need for new or upgraded facilities or assets necessary to meet ADA mandates, consulting the guidelines and criteria set forth in the Adirondack Park State Land Master Plan. The Department is not required to make each of its existing facilities and assets accessible. The facilities or assets proposed in this UMP are identified in the Management Recommendations section.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG)
The ADA requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

Currently adopted ADAAG address the built environment: buildings, ramps, sidewalks, rooms within buildings, etc. The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities: trails, camp grounds, picnic areas and beaches. The proposed ADAAG is contained in the September, 1999 Final Report of the Regulatory Negotiation Committee for Outdoor Developed Areas.

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Further, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when the Department is planning the construction of new recreational facilities, assets that support recreational facilities, or is considering an alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance to achieve modifications to trails, picnic areas, campgrounds, campsites and beaches in order to obtain programmatic compliance with the ADA.

ADAAG Application

Current and proposed ADAAG will be used in assessing existing facilities or assets to determine compliance to accessibility standards. ADAAG is not intended or designed for this purpose, but using it to establish accessibility levels lends credibility to the assessment result. Management recommendations in this UMP will be proposed in accordance with the ADAAG for the built environment, the proposed ADAAG for outdoor developed areas, the New York State Uniform Fire Prevention and Building Codes, and other appropriate guiding documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, the Department is required to use the best information available to comply with the ADA; this information includes, among other things, the proposed guidelines.

Historic and Archaeological Site Protection

The historic and archaeological sites located within the Vanderwhacker Mountain Wild Forest as well as additional unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law, 6 NYCRR § 190.8 (g) and Section 233 of the Education Law. No actions that would impact these resources are proposed in this Unit Management Plan. Should any such actions be proposed in the future they will be reviewed in accordance with the requirements of SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of the ECL and Section 233 of the Education Law. In some cases additional protection may be afforded these resources by the federal Archaeological Resources Protection Act (ARPA).

The archaeological sites located on this land unit as well as additional unrecorded sites that may exist on the property may be made available for appropriate research. Any future archaeological research to be conducted on the property will be accomplished under the auspices of all appropriate permits. Research permits will be issued only after approval by the New York State Museum and consultation with OPRHP

and APA. Extensive excavations are not contemplated as part of any research program in order to assure that the sites are available to future researchers who are likely to have more advanced tools and techniques as well as more fully developed research questions.

3. Restrictions

In 1932, the Power and Control Commission within the NYS Conservation Department (precursor to NYS DEC's Division of Water) approved an application by the Town of Schroon for use of Horseshoe Pond as a municipal water supply, pursuant to Article XIV, Section 2 of the State Constitution. Pursuant to Public Health Law, regulations to protect the water supply have been established, which include prohibiting public use of the pond, because of its status as a town reservoir. The reservoir no longer serves as the Town's primary water supply, but does serve as an emergency supply. Therefore, the prohibition of public use is still in effect.

Pursuant to NYCRR §196.5(a)(3), the operation of mechanically propelled vessels is prohibited on Hewitt Lake (Town of Minerva) and Oliver Pond (Town of Schroon).

A complete listing of other restrictions on the unit, or portions thereof, is not practical at this time, since they do not affect the management activities proposed in this UMP. Records of known restrictions are kept by DEC's Bureau of Real Property.

D. Management Principles

The following Wild Forest Management Principles are adapted from the principles of wilderness management presented in Wilderness Management: Stewardship and Protection of Resources and Values, by Hendee and Dawson. They have been modified to apply to the management of Wild Forest lands, consistent with the provisions of Article XIV, Section 1 of the New York State Constitution and the Adirondack and Catskill Park State Land Master Plans.

1. **Manage Wild Forest lands to preserve their wild character while permitting a greater variety of recreational activities and a higher degree of use than are allowed in Wilderness.** Those areas classified as Wild Forest are generally less fragile, ecologically, than wilderness and primitive areas. Because the resources of these areas can withstand more human impact, they should accommodate much of the future use of the Forest Preserve. Within constitutional constraints, those types of outdoor recreation that afford enjoyment without destroying the wild forest character or natural resource quality should be encouraged. "Wild forest character" encompasses, among other things, limited evidence of human works, the presence of unspoiled natural settings, and natural processes unhindered by human interference. Within the Recreation Opportunity Spectrum, lands classified as Wild Forest are generally less wild than lands classified as Wilderness, Primitive or Canoe Areas, yet still provide some probability of experiencing solitude and a high degree of interaction with the natural environment.

2. **Manage Wild Forest as a composite resource.** All the components of the Wild Forest resource–physical, biological, and social–are interrelated, and one management plan must deal comprehensively with those components and their interrelationships. Actions taken for the management of one component must be considered in light of how they will affect other components. Each component must be viewed as a part of the larger whole which is the Forest Preserve resource.

3. **Ensure that the natural and recreational environment of Wild Forest lands will not be degraded.** Wild Forest lands will be managed to maintain existing environmental conditions and to restore those areas in which resources have been or are being degraded below minimum levels. Minimum levels will be established in UMPs, which will conform with the guidelines of the Adirondack and Catskill Park State Land Master Plans. Resource conditions will be monitored and evaluated. Management actions will respond to specific areas in which changes in resource conditions exceed acceptable levels specified in the plan, or obvious impacts to resources are occurring.

4. **Protect Wild Forest lands by managing human influences.** Wild Forest lands will be managed to provide for a variety of outdoor recreational uses so long as those uses do not degrade the natural resources or wild forest character of the unit to an unacceptable degree. Care will be taken to prevent overuse of areas within the unit, to minimize impacts on natural resources and to preserve the quality of the wild forest recreational experience for visitors, as well as preserve the experience of other users. Each Wild Forest UMP will identify the existing and potential impacts of human activities on the unit and present management actions to address them.

5. **Manage Wild Forest lands for human values and benefits.** The Forest Preserve as a whole is valued as a protected landscape, where natural processes operate with minimal human influence, as a wild setting for primitive and unconfined types of recreation, as a symbol of the beauty and power of nature, as a resource for scientific study, and as an economic asset to the Adirondack and Catskill regions. Wild Forest lands will be managed to optimize their value as a setting for a variety of recreational activities within the context of their value as part of a constitutionally protected landscape.

6. **Encourage types of primitive and unconfined recreation on Wild Forest lands that are not dependent on a wilderness environment.** Consistent with their position on the Recreation Opportunity Spectrum, Wild Forest areas should accommodate those uses, such as regulated snowmobiling, motor boating, float plane use, all-terrain bicycling and group camping, which do not require the more pristine setting of wilderness, to the extent appropriate under the guidelines provided in the Adirondack and Catskill Park State Land Master Plans.

7. **Establish specific management objectives, with public involvement, in a comprehensive written management plan for the unit.** Within the constraints of Article XIV, Section 1 of the New York State Constitution and the Adirondack and Catskill Park State Land Master Plans, managers and the public will determine management objectives and actions for each Wild Forest unit in a written UMP, rather than reacting to situations on an ad hoc basis. Resources and the experiences of visitors will be monitored and evaluated for consistency with objectives as measured against standards set in the plan. Management actions will be adjusted through the planning process, if necessary, to meet stated objectives.

8. **Establish carrying capacities as necessary to prevent unacceptable unnatural change.** Recreation should be managed such that impacts to the biological/physical and social/psychological conditions of the unit are kept within acceptable levels as set in the plan. Management should not focus on complete preservation of present resource conditions, but rather on allowing natural processes and change to occur with moderate evidence of human interference. Unnatural change, such as soil compaction at tent sites, should be tolerated, but only up to established limits. The desired level of opportunity for human interaction among people and

groups should be set in the plan, so that the social experiences found on the unit does not become closer to that of more developed recreation areas.

9. **Monitor Wild Forest conditions to guide long-term management.** Once the carrying capacity of a specific Wild Forest area is established, it is essential that the biological/physical and social/psychological conditions of the area be monitored to track the success of management efforts in achieving carrying capacity objectives over time. The subjects of monitoring efforts should include the direct effects of use as well as the indirect effects of human activity, such as air pollution and the establishment of exotic plants and animals.

10. **Focus management on threatened sites and damaging activities.** Allocation of efforts and limited resources must first concentrate on those areas and activities that are having the greatest negative impact on natural resources and visitor experiences.

11. **Use the "minimum tool" necessary to accomplish management objectives.** Each management action will be reviewed to determine the minimum action or tool (practices, tools, equipment, regulations) that will be effective in accomplishing the task. Management will seek the approach from available alternatives that will achieve the management objective while having the least possible negative impact on the resources and the experiences of visitors. While the review of alternatives should include cost analysis, the potential degradation of resources will be considered before, and given more weight than, economic efficiency and convenience. When public use must be controlled to prevent resource degradation, education will be the preferred option followed by the minimum degree of regulation or control necessary to meet management needs.

12. **Involve the public in the management of Wild Forest lands.** The public will be afforded the opportunity to be directly involved with the process of developing UMPs for Wild Forest lands through comments forwarded directly to DEC and received at public meetings, and when necessary through such means as focus or discussion groups, surveys and other citizen participation techniques. In addition, volunteer efforts will be encouraged as a means by which Wild Forest UMPs will be implemented.

13. **Manage Wild Forest lands in relation to the management of adjacent lands.** Wild Forest lands must be viewed as a part of the larger landscape, which includes nearby communities and private lands as well as other public lands. Wild Forest management should be coordinated with the management of adjacent state and private lands in a manner that recognizes differing land management goals. This applies not only to the effects that management actions taken in the Wild Forest unit may have on adjacent lands, but also to the effects that management of adjacent lands may have on the Wild Forest unit.

E. Management Issues and Desires

Several issues are of concern to the Department and the public in the development of this plan. Information has been obtained from the public by way of a Scoping Session, held on August 25, 2000 at the Newcomb Town Hall, as well as through mail, email, phone calls, and other conversations between DEC staff and the public. The following issues and desires were received from the public and DEC staff. Some of the issues and desires have not resulted in Management Recommendations and may not be discussed further in Section IV. Where this has occurred, a justification for the exclusion is provided in italics.

1. Camping

- Build lean-to's on Cheney Pond, the Hudson River, Wolf Pond, and the Boreas River.
- Clean-up problems associated with at-large camping at Muller Pond.
- Provide camping on VMWF to alleviate pressure on Santanoni.

2. Trails and other facilities

- Construct new foot trails to Wolf Pond, Lower Duck Hole, Grassy Pond, Hotwater Pond, Nate Pond, Dutton Mountain, the Moxham Range, Burroughs Cave, the Hudson River, and the parcels south of HNWA.
- Improve and designate the existing herdpath to Vanderwhacker Pond.
- Extend the Linsey Marsh trail north to the Boreas River and northeast to Lester Flow.
- Construct horse trails, specifically between Santanoni and the Lake Harris Campground.
- Develop multi-use trails.
- Develop interpretive trails.
- Open trails to mountain bikes.
- Reopen old nordic ski trails in the Raymond Brook drainage and around Pete Gay Mountain.
- Construct new nordic ski trails in the vicinity of Santanoni, Linsey Marsh, and the access to VMWF from Route 28N in Newcomb.
- Formalize use of the D&H Railroad tracks for nordic ski use.
- Provide groomed ski trails.

  In the Adirondack Park, groomed ski trails on public land are generally provided on only a few units, such as Mount Van Hoevenberg Winter Recreation Area. Furthermore, the APSLMP prohibits the use of motor vehicles in the grooming of ski trails in Wild Forest areas. Due to this as well as fiscal restraints, the Department is unable to groom ski trails in VMWF with or without the use of motor vehicles. Opportunities exist on adjacent private and public land to ski on groomed trails.

- Construct family loop trails.
- Construct trails that link VMWF to other state land units and nearby hamlets.
- There is a need for more foot trails.
- Improve trail maintenance, specifically on the Linsey Marsh trail.
- Support volunteer maintenance of trails and facilities.
- Improve opportunities for recreation for persons with disabilities.
- Improve or provide canoe launches at Balfour, Oliver, Cheney, the Hudson.
- Secure public portages along the Hudson River.
- Determine a course of action in maintenance of the Ranger Cabin on 28N.
- Support the routing of the North Country National Scenic Trail.
- Provide a firing range.

  The APSLMP does not provide for designated firing ranges in Wild Forest areas.

3. Snowmobiles (general)

- Create snowmobile trails in this unit that facilitate snowmobile access between the communities of Minerva, Newcomb, Pottersville, and Schroon Lake.
- Use/do not use D&H Railroad tracks when providing snowmobile access between communities.
- Use/do not use Cheney Pond and Hewitt Pond trails when providing snowmobile access between communities.
- Minimize snowmobile travel along roads.
- Limit new snowmobile trails to existing travel corridors.
- Place new snowmobile trails at the edges of Wild Forests rather than through the center.

- Maximize/minimize snowmobile travel on state land.
- Widen/do not widen snowmobile trails within the unit.
- Build new trail to get snowmobiles safely off Harris Lake.
- Provide proper and highly visible signage at Santanoni gatehouse if snowmobile trail is developed between Santanoni and Lake Harris Campground.
- Recognize positive economic impact of snowmobile trails.
- Build a snowmobile bridge over the Boreas River at Lester Dam.
- Build snowmobile trail along the Boreas River from 28N to Lester Flow.

  This proposal cannot be entertained due to the Scenic classification of the above section of the Boreas River. The Wild, Scenic and Recreational Rivers Act limits construction of motorized vehicle roads and trails within the river area of a Scenic River. Although the river area may, under certain conditions, be crossed by motorized vehicle roads and trails, the construction of such roads and trails along the river is discouraged in the Act.
- Build snowmobile trail from Northwoods Club Road to the hamlet of Minerva.

4. Vanderwhacker Snowmobile Trail

- Close the trail permanently.
- Reopen the trail.
- Replace the trail elsewhere if it is permanently closed through the UMP process.
- Use/do not use the trail in the trail facilitating access between Minerva and Newcomb.

  All of the above proposals are examined later in the UMP in the discussion of providing snowmobile access between the communities of Minerva and Newcomb.

5. Parking and Trailheads

- Provide a safe parking area on the Blue Ridge Road for the Roosevelt Truck Trail and the trail to Vanderwhacker Pond.
- Create a trailhead and parking where VMWF abuts 28N in Newcomb.
- Make coordinates available at trailheads for public use.

  Given the fact that trailhead coordinates can already be obtained from existing sources, and the likelihood that such information would be superfluous to all but a small number of people, the Department believes it is not necessary to include such information at trailhead kiosks or registers.

- Plow parking area for Cheney Pond-Lester Flow trail.

  The parking area is currently plowed by Department staff based at Camp Santanoni. The lot may not always be plowed in a timely fashion. An effort will be made to improve the timeliness of that plowing within current staffing levels.

- Do a better job of identifying unit classification and rules and restrictions at the trailhead.
- Provide equestrian parking on VMWF to alleviate pressure on Santanoni.

  The recently adopted Unit Management Plan for the Camp Santanoni Historic Area (CSHA) addresses this problem through the proposal to provide additional parking for equestrian users at the gatehouse complex. No further parking area construction is contemplated in this VMWF UMP. Such a proposal may be addressed in future updates to the VMWF or CSHA UMPs, if it is determined that parking within CSHA is still insufficient.

6. Motorized Use

- Allow/prohibit ATV and other off-road vehicle use in this unit.

  The available infrastructure and facilities of the unit, when reviewed under the APSLMP Wild Forest Guidelines for Management and Use and current policies, do not allow for the development of ATV trails within the unit. There are very limited ATV riding opportunities anywhere on Forest Preserve lands within Region 5.

- Brush and maintain Cheney Pond Road.
- Increase Department share of maintenance of Moose Pond Road.
- Rebuild Santanoni road properly.

  Although it was formerly considered to be a part of the VMWF, Camp Santanoni is now classified as a separate state land unit. This plan will not address improvements to facilities that are located outside the planning area.

7. Real Property

- Do a better job of maintaining boundary lines.
- Improve posting/signage of VMWF lands.
- Establish public access to the North River Mountains parcel.
- Settle Real Property disputes including:

  a. Access Roads - There are several access roads (not currently maintained by local or state government) over VMWF that are not driven by the general public, but lead to private land and are used by private landowners and their guests to access their land via ATV and 4WD vehicles. These include:

  - Four wheel drive road across state land on lot 37, Township 26, Town of Minerva. This accesses the private inholding on lot 38, owned by Finch, Pruyn & Company, Inc. The length on state land is approximately 0.25 miles. It is used by the owner and their lessees.
  - Road across lot 16, Thorn's Survey, Township 27, Town of Newcomb. This accesses an inholding on lot 25, owned by Finch, Pruyn & Company, Inc. The length on state land is approximately 0.25 miles. It is used by the owner and their lessees.
  - Stony Pond - Irishtown snowmobile trail. The southern end is occasionally traversed via ATV as far as Big Sherman Pond.
  - Cheney Pond - Irishtown snowmobile trail. The southern end is traversed via ATV, presumably by owners of the private inholdings near Mud Pond and their guests to access the properties.
  - Road across Lots 118 and 119 in Township 26, accessing an inholding on lot 118. The length on state land is approximately 0.75 miles. A TRP was issued in 1997 allowing the owner to use the road in the removal of forest products. However, there is no known deeded right-of-way to this property across state land.
  - Access road across Lot 32 of Thorn's Survey of Township 27 to reach privately-owned camp on Lot 22
  - Access road across Lot 46 of Bailey's Patent in Township 25 to access private property on Lot 47.

All claims by inholders regarding rights of access across Forest Preserve in VMWF should be substantiated by documentation produced by private inholders and will also be researched by DEC.

b. Encroachments

- There is a building located partially on state land on the boundary between Hoffman Township Lot E and Tract West of Road Patent Lot 174.[1] The driveway to this building - and to the adjacent private parcel - begins on state land. Department legal review indicates that this driveway is not a legal right-of-way and should not be used for motorized access to the property.
- Investigate other encroachments as they arise, including timber trespass.

c. Questionable Ownership

- Lot 94 Hoffman Township - The eastern portion of lot 94, Hoffman Township, Town of Minerva is in dispute, as a portion of this piece is deeded to a private individual. The current owner was aware of the conflicting claims when he purchased the property, and does not plan to log or build on the disputed portion. A survey request was filed in 1979 following a timber trespass. The State was unable to determine title, the survey was never done, and the charges against the logger were dropped. To this date, it is not known how much of lot 94 is owned by the state.
- Lot 93 Hoffman Township - On DEC and APA maps, the entire lot is represented as state land. However, it seems the northwestern portion of the lot may be privately-owned and the south eastern portion is state-owned. The unusual shape of the Great Lot may have lead to the possible misrepresentation on state maps. The ownership will be investigated and reflected in future maps.
- Lot 41, Township 14, Pond's Survey - The southeast corner of lot 41, Township 14, Pond's Survey, Town of Minerva is in dispute. A camp is situated on this parcel. DEC Real Property Staff have determined that the State owns the parcel, and staff are in contact with the private citizen who also claims ownership.
- Lot 28, Township 14, Pond's Survey - The location of the southeastern boundary line is unclear. An old camp at the end of the woods road appears to be located on state land. The line should be re-established and the building removed if it is indeed located on state land.

8. Other

- Allow salvage cutting on the Forest Preserve.

The lands of the Forest Preserve are protected by Article XIV, Section 1 of the New York State Constitution, which provides, in part:

> *The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged... nor shall the timber thereon be sold, removed or destroyed.*

Although salvage cutting has occurred on the Forest Preserve in the past, viz, the park-wide blowdown event of 1950, pursuant to legislation, it should be noted that this is the only time that salvage cutting has been allowed on Forest Preserve land.

- Increase Forest Ranger and Surveyor staffing for VMWF.
- Remove non-conforming structures, facilities, and uses.
- Seriously consider citizen's comments.

[1]This building has since been torn down, although some C&D material may still remain on VMWF lands and should be removed.

- Test streams for potability.

  The Department cannot regularly test waters in VMWF for potability. To be safe, recreationists should always filter water from any stream or waterbody in VMWF before drinking.

- Improve economic opportunities in winter.
- Make significant forest types known to the public, like Boreas Hardwoods and the large-diameter white pines at north end of Vanderwhacker Trail.

SECTION IV: MANAGEMENT RECOMMENDATIONS

This section of the plan breaks down the various resources of the unit into the following categories; bio-physical resources, land protection, man-made facilities and public use and access. Each category is further broken down into component units where the present conditions are assessed, management objectives developed and management actions proposed. All recommended actions are consistent with the management guidelines and principles outlined above, and are based on information gathered during the inventory process, through public input and in consultation with the Planning Team. For each proposed activity, the appropriate permits, if any, will be acquired prior to construction. In addition, all of the proposed management actions involving construction described on the following pages will be undertaken in accordance with the best management practices discussed on pages 67-69 in order to avoid or mitigate environmental impacts.

A. Bio-Physical Resource

1. Water

Present Conditions:

The DEC Bureau of Fisheries routinely conducts biological surveys to assess and monitor fish populations in area waters. Additionally, the Adirondack Lakes Survey Corporation (ALSC) conducts water quality studies researching the effects of acid deposition on aquatic ecosystems. The DEC Division of Water conducts the statewide Lake Classification and Inventory (LCI), which is a comprehensive lake monitoring program that measures both water chemistry and biological parameters to evaluate lake water quality and trophic condition. No VMWF waterbodies are currently included in the LCI.
No studies have specifically focused on the effects of recreation use on water quality.

Objectives:

- To maintain, protect and/or improve the quality of the area's water resources.
- To gain detailed knowledge on the public's use of the area's waters, and how that use may be negatively impacting water resources.

Management Actions:

- Continue existing research and management activities that monitor the effects of acid deposition and recreational use on water resources. Support new research as appropriate (e.g. funding, staffing, permitting, etc.).
- Develop a system to monitor public use of the area's water resources. Establish and maintain register journals on the area's larger waterbodies (including Balfour Lake, Cheney Pond, and Oliver Pond).
- At the discretion of the Area Manager, close or rehabilitate shoreline areas impacted by overuse.
- Add three VMWF waterbodies to the LCI in order to begin representation of the unit in that program. The waterbodies will be chosen based on ease of access for data gathering.

2. Soil

Present Conditions:

Determinations of various soil types within the unit are general. Little information has been compiled on soil loss and/or degradation within the unit, except that there are a few sites where soil disturbances on trails require rehabilitative actions. These areas were discussed in Section II of this UMP. Overuse, changes in hydrology, and poor design have all contributed to negative impacts on soil resources at a few

select locations. However, guidelines that limit the development and type of recreation that can occur within the unit have served well in overall protection of the unit's soil resources.

Objectives:

- To minimize negative impacts to the soil resources of the unit caused by recreational use.

Management Actions:

- Through field observation, inventory and monitor soil conditions within the unit affected by recreational use.
- Develop LAC indicators and standards for soil erosion.
- When LAC standards are exceeded, correct undesirable conditions by rehabilitating the area and/or relocating use to more durable sites.
- The Area Manager, in accordance with existing guidelines, will close, relocate, or restrict use of unit facilities, as appropriate, to reduce negative impacts to soil resources caused by recreational use.
- Concentrate trail maintenance efforts on areas prone to erosion and overuse.
- Design, locate, and construct all new structures and improvements in ways that will minimize the potential for soil erosion.

3. Wetlands

Present Conditions:

The APA has authority under the NYS Freshwater Wetlands Act (1975) and the Adirondack Park Agency Act (1971) to regulate wetlands within the Adirondack Park. This authority extends to all wetlands over one acre in size, or any size wetlands adjacent to open water. Wetland inventories and maps for the entire Park are incomplete. A comprehensive wetland inventory and additional mapping are needed.

Objectives:

- To preserve and protect wetland community vegetation and associated plant species.
- To minimize the amount of wetland disturbances and impacts caused by the construction, maintenance and use of structures and improvements.

Management Actions:

- Coordinate all future construction and maintenance activities that may affect wetlands with the Adirondack Park Agency to determine wetland boundaries and the need for wetlands permits.
- Install bridges, culverts and other erosion control devices as appropriate to protect wetland areas.
- Promote the development of GIS information to assist managers in accessing inventoried wetland data.
- Relocate any trails or facilities when necessary to reduce the impacts on wetlands or associated vegetation.
- Install and maintain erosion control devices on trails to minimize soil movement into wetlands.
- Minimize the impacts of construction and maintenance activities on wetlands.

4. Vegetation

Present Conditions:

Forest succession and natural and human disturbances have impacted the distribution and types of vegetative cover within the unit over time. However, due to the stringent constitutional protections, human disturbances have had little impact on the unit's vegetation in the past century. Impacts directly

attributed to recreational use do exist, but these problems are concentrated to areas of high use and are not widespread.

Objectives:

- To continue to allow natural processes to function in the succession of plant communities.
- To protect species and ecological communities identified as rare, threatened or endangered.
- To support research efforts that monitor and map forest health and changing forest conditions.
- To prevent the spread of invasive plant species.

Management Actions:

- Enforce existing policies and regulations that protect the unit's vegetation.
- Relocate existing facilities, or locate and construct new facilities where they will not impact rare, threatened or endangered plant species or communities.
- As authorized by New York Education Law § 235-a and pursuant to Environmental Conservation Law § 3-0302, support the New York State Biodiversity Research Institute in the identification of lands and waters that harbor plants, animals and ecological communities that are rare within the unit.
- Continue to allow and support forest research activities by Temporary Revocable Permit.
- When reclamation or restoration of an area negatively impacted by recreational use is necessary, utilize only native vegetation.
- Develop LAC indicators and standards for condition of vegetation in camping areas and near riparian areas.
- Monitor vegetation in high-use areas to determine overuse and the need for restricting use in such areas.
- Assist the New York Natural Heritage Program in monitoring the presence of rare, threatened and endangered plants and significant plant communities where they occur within VMWF.
- Continue to work with the other organizations of the Adirondack Park Invasive Plant Program to detect, prevent the spread of, and remove populations of invasive plants from VMWF. As part of this effort, the known population of Japanese Knotweed on VMWF along the Northwoods Club Road will be removed. See Appendix R for additional information.
- No aquatic plant occurrences are reported within the Vanderwhacker Mountain Wild Forest, therefore there are no management recommendations prescribed at this time. However, several lakes southeast of the unit are documented with infestations which could spread to uninfected waters, thus ongoing inventory is required to detect new invasive plant occurrences in uninfected lakes. Waters with public access should be regularly inventoried for the presence of aquatic invasive plants. If aquatic invasive plant infestations occur, rapid response should be implemented by hand-pulling plants via the guidelines set forth by the Adirondack Park Agency's "Advice on the Hand-harvesting of Nuisance and Invasive Aquatic Plants." Additional methods may be required to manage an infestation to contain, reduce, or eradicate the population. Management will require assessing a set of criteria to evaluate site conditions to determine appropriate and permitted actions.
- The Department will enter into cooperative partnerships through Adopt-a-Natural-Resource Stewardship Agreements (ANRSA) and TRP's to facilitate containment and eradication of the invasive plant occurrences within the unit. Any eradication work involving the use of herbicides will be carried out under an Inter-Agency Work Plan for Management of Terrestrial Invasive Plant Species on State Land in the Adirondack Park (Invasive Plant Work Plan), developed by DEC and APA. This Invasive Plant Work Plan will provide a template for the process through which comprehensive active terrestrial invasive plant management will take place on state lands in the Adirondack Park. The Work Plan will provide protocols for implementing BMP's on state

land. The protocols will describe what management practices are acceptable and when they can be implemented, who can be authorized to implement the management practices, and which terrestrial invasive plant species are targeted. The Work Plan will also describe a process by which the Department may enter into ANRSA's to facilitate individuals or groups seeking to manage terrestrial invasive plant species on state lands using the listed Best Management Practices, including herbicide use, in the appropriate circumstances. The Invasive Plant Work Plan will be subject to SEQRA and serve as the mechanism for assessing the impacts and suitability of eradication BMP's and actions.

5. Wildlife

Present Conditions:

Wildlife management within the Forest Preserve is largely passive in nature. Cutting or burning of vegetation to modify wildlife habitat is not permissible. Because natural succession is allowed to progress toward ecological climax on Forest Preserve lands, some wildlife populations will increase, and many others will decrease over time as these changes occur. The Forest Preserve concept provides a strategy of land preservation, allowing for minimal management. Natural processes, in conjunction with fire suppression, will change the character of the forest over time.

Objectives:

- To perpetuate, support and expand a variety of wildlife recreational opportunities, including wildlife observation and photography, and sustainable hunting and trapping pursuits, as desirable uses of wildlife resources.
- To assure that wildlife populations are large enough to contain sufficient genetic diversity to maintain population health and withstand disturbances.
- To minimize the damage and nuisance caused by wildlife.
- To meet the public's desire for information about wildlife and its conservation, use, and enjoyment.

Management Actions:

- Manage and protect wildlife through enforcement of the Environmental Conservation Law and applicable Rules and Regulations.
- Support traditional use of the unit's wildlife resources, particularly activities designed to perpetuate hunting and trapping programs and hunter education efforts.
- Continue to monitor and inventory wildlife populations, particularly game species and those classified as rare, threatened, endangered or special concern.
- Active management of wildlife populations will be accomplished primarily through hunting and trapping regulations developed by Wildlife Management Unit. Continued input from Citizen Advisory Committees will be considered in determining desirable levels of wildlife.
- Re-establish, to the extent possible, self-sustaining wildlife populations of species that are extirpated, endangered, threatened or of special concern in habitats where their existence will be compatible with other elements of the ecosystem.
- Provide information, advice and assistance to individuals, groups, organizations and agencies interested in wildlife whose activities and actions may affect, or are affected by, the wildlife resources or the users of wildlife.
- Provide information, advice and/or direct assistance to requests for relief from or solutions to reduce or alleviate problems with nuisance wildlife.

6. Fisheries

Present Conditions:

The Vanderwhacker Mountain Wild Forest supports a diverse fishery resource that includes several well-used waters. Fish management in the Vanderwhacker Mountain Wild Forest has emphasized brook trout, brown trout, largemouth bass, smallmouth bass and various panfishes. Intensive management efforts such as special regulations, fish stocking, and pond reclamation have been utilized to enhance and restore brook trout in several unit waters. Such actions may also be necessary in the future depending upon the spread of undesirable non-native species.

Objectives:

- To maintain the diversity of coldwater and warmwater fish populations in the unit.
- To encourage and promote angler use of the waters in the unit through routine fish management practices including hotlines, correspondence and contact with the public by Department staff.

Management Actions:

- Conduct biological surveys of waters within the unit as required.
- Manage Barnes Pond, Big Sherman Pond, Black Pond, Center Pond, Hewitt Pond, Lost Pond (P382a UH), Nate Pond, Stony Pond, Twenty-ninth Pond, unnamed pond (P551a UH), and Wolf Pond as Adirondack brook trout ponds.
- Manage Newcomb Lake, Oliver Pond, Rankin Pond, and Vanderwhacker Pond as coldwater ponds.
- Reclaim Black Pond, Center Pond, Oliver Pond, Stony Pond (along with unnamed pond P558a-UH), and Vanderwhacker Pond upon establishment of additional fish(es).
- Reclaim Nate Pond when a donor population for the Nate Pond strain of brook trout is established.
- Reclaim Bigsby Pond and Twenty-ninth Pond if concerns from private landowners are addressed. The specific concerns of these landowners have not been identified, but typical concerns include: generic unease about the use of chemicals; temporary restrictions on use of the water until the rotenone has dissipated; and objections to the concept of eliminating the present fish community to restore native species.
- Provide a car top, ADAAG compliant boat launch on Balfour Lake, and create/improve trails into Wolf and Vanderwhacker Ponds.
- Annually inspect and maintain the man-made fish barrier on the outlet of Oliver Pond.
- Additional proposed management actions are provided in Appendix B, Individual Pond Descriptions.

B. Land Protection

1. Administration

Present Conditions:

Administration of the area is the responsibility of DEC staff from Region 5 assigned to the Divisions of Lands and Forests; Operations; Fish, Wildlife and Marine Resources and the Office of Public Protection.

Objectives:

- To improve coordination between the various Divisions in the management of the area.
- To improve the monitoring of public use of the unit.
- To protect the natural resources of the area.

- To ensure the management of the area complies with all applicable rules, regulations, policies, guidelines, laws, constitutional provisions and the APSLMP.

Management Actions:

- An annual Work Plan meeting will be scheduled and organized by the Area Manager. The meeting will involve appropriate staff from the Divisions of Operations, Lands and Forests, Fish, Wildlife and Marine Resources, and the Office of Public Protection. The purpose of the meeting will be to improve coordination and communication between staff involving the maintenance and management of this unit, and other nearby units as deemed appropriate. The result of the meeting will be an Annual Work Plan, prepared and distributed by the Area Manager, that will outline project-specific materials, time and financial allocations and staff assignments necessary to manage this area. Maintenance activities and projects to be completed by volunteers will be identified in the Work Plan and arrangements made for the supervision of such work. Copies of the Annual Work Plan will be provided to the appropriate Regional Program Supervisors and the Regional Director.
- Develop a system to monitor the public use of the area. Establish and maintain register journals at popular lean-tos and trail registers at popular trails. Supplement trail register data with site sampling techniques (trail timers, head counts, infrared counters, visitor surveys, etc.) to determine actual public use numbers better.
- Utilize Adopt-A-Natural Resource Agreements, where feasible, to enhance DEC maintenance activities.
- Investigate and resolve Real Property problems, including those outlined in the Management Issues, Needs and Desires section of this document as well as those listed below:
    - Hoffman Township, Lots 74, 80, & 81 - The property lines in the vicinity of Ledge Hill, Pine Hill, Green Hill, and Alder Brook in the Towns of Schroon, Chester, and Minerva should be located and marked.
    - Hoffman Township, Lots 66, 95, and 96 - The property lines in this vicinity should be located and marked.
    - Township 14, Pond's Survey, Lots 44 and 52 - The west line of Lot 44 from Fourteenth Road to the south corner and the north line of Lot 52 should be located and marked.
    - Township 25, Thorn's Survey, Lot 30 (Town of Minerva) - The south and west property lines should be located and marked.
    - Township 30, Lot 24 (Town of Minerva) - Property line around the "Kay's Place" inholding should be established.
- Work with the APA to investigate inaccuracies regarding VMWF in the 2003 APA State Land Map, as outlined in Appendix J. Update the map to reflect actual state ownership and land classification, if necessary.
- Mark and maintain boundary lines according to established department policy with particular attention in the following locations:
    - Hoffman township:
        Lot E - approximately 1 mile
        Lot 38 - approximately 1 mile
        Lot 56 (back line of private land near Oliver Pond) - approximately 0.3 miles
        Lots 86-90 (parcels neighboring Scaroon Manor) - approximately 4 miles
    - Township 30
        northeast line of Township from Blue Ridge Rd to Boreas River - approx. 3 miles

2. Open Space/Land Acquisition

Present Conditions:
The State's land acquisition efforts are guided by the most current copy of Conserving Open Space in New York State, commonly referred to as the "Open Space Plan." Authorized by a 1990 Act of the Legislature (ECL § 49-0207), the Open Space Plan was prepared through a joint effort between the DEC and the Office of Parks, Recreation and Historic Preservation. These two agencies also worked with nine Regional Advisory Committees appointed jointly by the State and local governments. The most recent version of the Open Space Plan was approved in 2002. Two of the most often cited priorities for the State in acquiring open space are to limit development and to increase public access to water resources and existing State lands. Priorities in VMWF should include securing easements for portages along the upper Hudson River and improving access to the landlocked North River Mountains parcel in the Towns of Newcomb and North Hudson.

Objectives:
- To encourage land acquisition efforts that enhance public access to existing VMWF lands.
- To complete a land acquisition needs assessment for the area in accordance with the Open Space Plan.

Management Actions:
- Pursue fee title acquisitions that afford increased and improved access, consolidate state holdings and ease administration and enforcement efforts using a "willing seller" approach.
- Where fee title acquisition is not an option, or when easements are a better option, acquire easements to improve and enhance public access, recreation and/or open space protection.

C. Man-Made Facilities

1. Trails

Present Conditions:
The unit's trail system contains a mix of trails marked for both snowmobile and/or foot travel. The 28N State Highway corridor is the beginning point for many of the trails, such as those leading to Stony Pond, Hewitt Pond, Rankin Pond, Vanderwhacker Mountain, and the Boreas River. The Cheney Pond snowmobile trail travels between the Blue Ridge Road and Irishtown and forms the boundary between VMWF and Hoffman Notch Wilderness Area. Short sections of trail in the Little Gore area cross state land, and a foot trail connects Camp Santanoni Historic Area and the Lake Harris Campground. Maintenance of the trail system is accomplished by DEC Operations staff, SCA staff and volunteers, other volunteers, and local municipalities and by contracting work as funds are available. Often, due to the remote character of the area, maintenance is reactive rather than planned. As a result, many remote trail locations do not receive the attention they require unless problems are specifically brought to the Department's attention.

Objectives:
- To provide a trail system that offers the public safe and appropriate opportunities for desired levels of permissible use.
- To provide better coordination and communication between DEC Divisions, volunteers and local municipalities for the maintenance of existing trails.
- To upgrade and maintain existing trails to the specifications as outlined in the Department's Trail Construction and Maintenance Manual.
- To provide snowmobile access between the communities of Minerva and Newcomb

Management Actions:

- All trail work will comply with existing Department policy regarding work and project plan development. Project Plans for trail work will be integrated into the Annual Work Plan outlined above. As required, the Department will consult with the APA and maintain full compliance with the State Environmental Quality and Review Act (SEQRA) on any projects where new trails are constructed or existing trails are relocated. Specific proposals follow in this section.
- Develop LAC indicators and standards for extent of soil erosion on trails.
- The marking and/or maintaining of trails not recognized by the Department (unofficial trails) will be discouraged. Efforts will be made to either legitimize such trails by officially marking and maintaining them or to close them.
- Maintain and construct all snowmobile trails within the unit in accordance with existing policies and guidelines. These trails will be maintained to have essentially the same character as a foot trail, in compliance with the definition of "snowmobile trail" in the APSLMP. In those cases where trails to remain open have grown in, reducing the trail width, the trails will be cleared according to policy standards. Any trees to be cut as part of this work will be identified in a work plan, AANR agreement or TRP or specifically approved by the Regional Forester, consistent with Department policy LF91-2.
- Construct a foot trail to Moxham Mountain in the Town of Minerva. The trail will commence from Fourteenth Road and be approximately 2 miles long. See Appendix J for a more detailed description.
- Construct a foot trail to Wolf Pond in the Town of North Hudson. The trail will commence from the Blue Ridge Road and be approximately 2 miles in length. See Appendix J for a more detailed description.
- Construct a short interpretive family trail system through VMWF connecting the Visitor Interpretive Center at Newcomb to the Camp Santanoni Historic Area. See Appendix J for a more detailed description.
- Designate, mark, and maintain the existing herdpath leading to Vanderwhacker Pond from the Blue Ridge Road. The trail, which follows Vanderwhacker Brook and crosses it three times, is presumably used by local anglers due to a once excellent trout fishery. (Competition with golden shiners is the most likely cause for the decline; brook trout seem to be particularly vulnerable to competition in relatively shallow ponds like Vanderwhacker). The marked trail will follow sections of the herdpath, but will avoid wet areas and seek to reduce the number of stream crossings. Reclamation of Vanderwhacker Pond by Fisheries staff is proposed if additional fish species become established. The trail is also intended for winter use, including nordic skiing and snowshoeing. Upgrade of existing informal parking area is proposed in Trailheads Section below.
- Upgrade existing trail and construct new trail to create a Raymond Brook nordic ski trail on state land between Barton Mines Road and State Route 28. See Appendix J for a more detailed description.
- Designate and construct a snowmobile trail which will provide snowmobile access between the communities of Minerva and Newcomb, using a combination of existing trails and new trail construction on public and private land as outlined in Appendix I. The DEC will work closely with the APA during new trail layout, design, and construction to obtain wetlands permits, if necessary and to develop appropriately detailed work plans. Any trees to be cut as part of this work will be identified in a work plan, ANRSA agreement or TRP or specifically approved by the Regional Forester, consistent with Department policy LF91-2.
- Designate and construct a snowmobile trail which will provide snowmobile access between the hamlets of Pottersville and Schroon Lake, using a combination of existing trails and new trail construction on public and private land as outlined in Appendix I.
- Reopen Vanderwhacker trail to snowmobiles as outlined in Appendix I.

- Construct a snowmobile trail between the DEC Operations garage at the Camp Santanoni Gatehouse and the Lake Harris Campground. Currently, snowmobile traffic traveling from Long Lake and the west side of Newcomb must travel across Lake Harris to reach the east side of the town. In particular, traffic accesses the lake via the town beach, crosses the lake and then leaves it via the state campground and follows Campsite Road to its intersection with Route 28N. In the interest of making the route safer and avoiding crossing the ice of Lake Harris, it is proposed that the route from 28N follow Newcomb Lake Road across the bridge and continue as far as the Santanoni parking lot and then head east past the Operations shop and generally parallel the existing foot trail to the DEC campground. To be suitable for snowmobile use, the new trail should be built generally upslope from the current foot trail, avoiding wetlands and steep slopes. Furthermore, the new trail should be designed and designated for bicycle use in the non-winter months, facilitating a much needed bicycle connection between the campground and the historic area. Clear signage will be posted along the trail highlighting the fact that Newcomb Lake Road is closed to snowmobiles. The campground and CSHA UMPs will need to be amended or revised to accommodate the development of this trail. See Appendix J for more detail on this proposal.
- Initiate an assessment to determine how and whether the snowmobile trail outlined above could accommodate equestrian use in the non-winter months and how it may impact the Camp Santanoni Historic Area and the Lake Harris Campground.
- Close Linsey Marsh trail to snowmobiles. DEC Policy ONR-2 (Snowmobile Trails - Forest Preserve), states, in part: "When a snowmobile trail is no longer used or receives only minimal use, such trail shall be closed;" and "[d]ead-end snowmobile trails shall not be established and any such trails now in existence shall be closed unless such trail dead-ends at a specific facility or feature used by the public in the winter season." The Linsey Marsh trail is such a trail. It is isolated, short (two miles long), and dead-ends at the marsh. It has been used as a snowmobile trail over the years, and has appeared in DEC publications as such as recently as 1989. However, current signage at the trailhead is unclear. It is labeled simply as a trail, with no specification as to whether snowmobiles are allowed. Additionally, precise use data for this trail is not available, as there is no register, but observations by the local Forest Ranger indicate that the trail has seen very little snowmobile use over the last ten years and no snowmobile use in the last three years. Therefore, the trail will be closed to snowmobile use and clearly signed to that effect.
- Support the development of the North Country National Scenic Trail if eventually routed through VMWF. For a more in-depth discussion, see Appendix J.
- Investigate and consider additional trail construction projects in preparation for the next revision of this UMP, including a family loop trail at the 28N access point to VMWF in Newcomb and a foot/bicycle/ski trail connecting the Lake Harris Campground with the Santanoni Great Camp complex. Such a trail may also require revisions to the Santanoni and Lake Harris Campground UMP's. See Appendix J for more detail.
- Post "Wild Forest" signs at the points where the Schroon Lake snowmobile trails enter State Land. Add DEC snowmobile markers to these sections of trail, as well.
- Formally adopt the existing Camp Santanoni - Lake Harris Campground foot trail. This trail was established in the 1980's without benefit of formal approval through the UMP process.
- Execute work project on the Stony Pond snowmobile trail between 28N and Stony Pond as outlined in Appendix J.

2. Trailheads

Present Conditions:
Maintenance of existing trailheads consists of repairing vandalized structures, picking up litter and occasionally grading or snow plowing. At a handful of trailheads, parking areas are improperly delineated and resource degradation has resulted. A parking area is located at Oliver Pond approximately 200 feet from Hoffman Road. Since the existing parking area can only accommodate two cars, additional cars are often parked randomly among the trees to the north of the parking area. Over the years, the roots and stems of mature trees north of the parking area have suffered from direct mechanical damage and soil compaction caused by vehicles. A parking area is located at Muller Pond and is accessed from Hoffman Road. A dirt track continues past the parking lot to the northeastern end of the pond near its outlet. This way has been used by motor vehicle over the years but is rutted, uneven, and unsuited for motorized use. The boles and roots of surrounding trees have been damaged by vehicle traffic navigating the narrow passage.

Collection of public use data has been spotty for several trailheads, including the Boreas River loop trail - due to improper placement of the register - and the Hewitt Pond foot trail. No public use data is collected for those trails without registers, including the Cheney Pond and Rankin Pond trails. There is an obvious need for the Department to get a better handle on public use of VMWF.

Objectives:
- To upgrade and improve existing parking areas to reflect that they are gateways to public lands.
- To provide appropriate and relevant information for visitors.
- To provide a safe area in which visitors feel comfortable parking their vehicles.
- To reduce litter and vandalism.

Management Actions:
- Upgrade the existing parking area on the Blue Ridge Road for the Vanderwhacker Pond herdpath. There is currently an informal parking spot with room for one vehicle. This will be expanded to provide space for 5 vehicles and should be plowed in winter. The parking area will also serve to provide parking for users of the nearby Roosevelt Truck trail. Expansion of this parking area will include cutting of trees, which will be tallied before construction begins. The proposed parking area will be leveled and covered with crushed stone. Proper drainage structures will be installed so that drainage is not impaired. Signage will be placed along the road, 1000 feet on either side of the parking lot to alert drivers of the approaching trailhead. An individual project plan will site the lot and detail any tree cutting that may be required in compliance with current policy.
- Construct a new 3-4 car parking area for the proposed trail to Moxham Mountain. The parking area will be adjacent to the trailhead on Fourteenth Road and will be constructed as a “pull-off” using the north shoulder of Fourteenth Road and additional fill material, if necessary. The lot will be located as close to the proposed trailhead as possible, taking advantage of the widest point of the existing shoulder. The parking lot will not be plowed, as Fourteenth Road itself is not plowed up to this point. Since the pull-off will be located mainly within the Town Road right-of-way, the Department will consult with the Town prior to construction. An individual project plan will site the lot and detail any tree cutting that may be required in compliance with current policy.
- Construct a new 4 car parking area on the east side of Barton Mines Road to serve the west end of the Raymond Brook nordic ski trail. There are two possibilities for locating a parking lot for this end of the trail. One option is to use the shoulder of the road to create a “pull-off” type lot. However, this will not be the safest option when snowbanks will effectively narrow the width of

the road in winter. The preferred option is to locate a lot that is separate from the road on higher, level ground just to the south of the intersection of the ski trail and the road. It will be necessary to cut and remove trees, as no clearing exists. The parking lot will be surfaced with crushed stone and the perimeter will be clearly delineated. An individual project plan will site the lot and detail any tree cutting that may be required in compliance with current policy.

- Designate an existing clearing adjacent to Route 28 just north of the hamlet of North Creek for parking and upgrade accordingly. The eventual aim is to connect the proposed Raymond Brook nordic ski trail with the existing ski trails of Little Gore, taking advantage of the existing parking area there. However, until an agreement with the neighboring owner can be reached, this clearing located on state land can be used. The clearing will require some work before it can be used as a parking area, including: grading the short driveway from the highway; covering it with crushed stone; and installing a drainage ditch on the uphill side. The clearing itself will be brushed and graded to provide space for 4 cars. If the ski trail can be connected to Little Gore, there will be no need to plow the lot. An individual project plan will site the lot and detail any tree cutting that may be required in compliance with current policy.
- Install trailhead registers on trails to Vanderwhacker Pond, Raymond Brook, Wolf Pond, Lester Flow, Rankin Pond, Sherman Ponds, and Moxham Mountain. Registers will be located at least 150 feet from parking areas to minimize losses of public use data due to vandalism. Install signage at the above trailheads providing destination mileages, except at Rankin Pond, where such signage already exists.
- Construct a canoe launch and small parking area at Balfour Lake as described in Appendix J.
- Place boulders immediately to the north of the small parking area at Oliver Pond in order to prohibit vehicles from damaging trees and causing soil compaction. Also place barriers to prohibit the launching of trailered boats. (Pursuant to NYCRR §196.5(a)(3), the operation of mechanically propelled vessels is prohibited on Oliver Pond). Three spaces will be created south of the fireplaces to make up for lost parking. This will involve the cutting of trees and removal of their stumps. An individual project plan will site the lot and detail any tree cutting that may be required in compliance with current policy.
- Place fill in low spot in access to Muller Pond parking lot. Motorized vehicles will be prohibited from traveling beyond the parking lot through signage and construction of an earthen berm at this location. Travel by foot will be encouraged and the path to the pond's edge will be hardened so that it is accessible to people with disabilities.
- Install boulders at Cheney Pond to prohibit the launching of trailered boats. APA staff have reported witnessing the launching of trailered boats at this site, a use which is not permitted. The APSLMP prohibits the state from providing "boat launching sites" (see Glossary on pg 275) on state lands in the Adirondack Park on lakes smaller than 1,000 acres. Cheney Pond is roughly 60 acres in area.
- The Department will continue to monitor Oliver, Muller, and Cheney Ponds and, in consultation with APA, will implement further mitigation efforts as necessary.
- Improve timely plowing of Cheney Pond trailhead parking area.
- Remove the two fireplaces at the west end of Oliver Pond. They are overly deteriorated and are not being used; there is no safe parking for this area; and the two fireplaces at the east end of the pond are sufficient.

3. Campsites

Present Conditions:

The area has a diverse mix of camping options available to visitors. There are designated interior camping facilities at Stony Pond, Cheney Pond, 29th Pond, and Newcomb Lake. There are also many

roadside locations used seasonally by hunters and during the summer by others along the Northwoods Club Road, the Moose Pond Road, State Route 28N and at other locations. There is generally an increase in camping in VMWF during the beginning of the regular big game season.

Objectives:

- To provide a diverse range of camping opportunities at locations that are desirable by the public and are consistent with the protection of natural resources.
- To monitor and quantify current levels of camping use accurately.
- To assure that campsite and lean-to locations comply with Master Plan guidelines.

Management Actions:

- Develop LAC indicators and standards for extent of soil erosion at campsites.
- Develop LAC indicators and standards for condition of vegetation in camping areas
- Construct one accessible lean-to each on Wolf Pond and Cheney Pond and maintain register journals. See Appendix J for a more detailed discussion.
- Install accessible privies at Cheney Pond and Wolf Pond to coincide with lean-to construction, utilizing the proposed ADAAG.
- Select two of the roadside sites along the Northwoods Club Road near to where it crosses the Boreas River, formally assess the sites for access by persons with disabilities, and develop the sites to appropriate ADAAG for camping. An informational sign at each site should indicate that, based on the honor system, if the site is left unoccupied after a pre-determined time (e.g. 6pm), the site may be used by persons without disabilities.
- Close the user-created campsite near the outlet of Muller Pond. The site is too close to the pond. Assess the area around the pond's outlet for access by persons with disabilities and develop a site to appropriate ADAAG for camping. An informational sign should indicate that, based on the honor system, if the site is left unoccupied after a pre-determined time (e.g. 6pm), the site may be used by persons without disabilities.
- Designate two additional primitive tent sites on the east side of Muller Pond, south of the outlet.
- Close 2 of the 5 tent sites located near the Boreas River at 28N, in accordance with the separation distance guidelines of the APSLMP. The remaining small grouping of 3 primitive tent sites can accommodate a maximum of 20 people under group camping conditions, when necessary. This area is particularly hardened and thus well-suited to withstanding the potential effects of group camping.
- Close 3 of the 6 tent sites located along the Northwoods Club Road near the Boreas River, in accordance with the separation distance guidelines of the APSLMP. The remaining small grouping of 3 primitive tent sites can accommodate a maximum of 20 people under group camping conditions, when necessary.
- Close the one primitive tent site on VMWF at Huntley Pond. It does not conform to the separation distance guidelines of the APSLMP, due to the presence of nearby primitive campsites within the Hudson Gorge Primitive Area.
- Close 1 of the 2 primitive tent sites located at Oliver Pond, in accordance with the separation distance guidelines of the APSLMP.
- Close 1 of the 2 primitive tent sites located at the Boreas River and Blue Ridge Road, in accordance with the separation distance guidelines of the APSLMP.
- Close 1 of the 4 tent sites located on Moose Pond Road near Vanderwhacker Brook, in accordance with the separation distance guidelines of the APSLMP. The remaining small grouping of 3 primitive tent sites can accommodate a maximum of 20 people under group camping conditions, when necessary.
- Signage identifying such groupings will be developed and posted at appropriate locations. The

Department will continue to monitor use at these groupings and take appropriate action to ensure compliance with the APSLMP.

- All closed campsites will be restored to a natural condition. Fire rings/places, tree stumps and other evidence of past use will be removed.
- Designate the campsite at Sunnyview Farm, that has traditionally been used during regular big game season.
- Conduct a baseline inventory of all established campsites.
- All primitive tent sites within the unit will be monitored for damage due to overuse. Where ease of access by motc vehicle appears to be contributing to overuse of primitive tent sites the least intrusive measures, such as education and/or site remediation, will be implemented. If these are not successful in reducing user impacts, more stringent measures will be considered and appropriate management actions taken. However, consideration will be given to maintaining motor vehicle access to tent sites that provide recreational opportunities for people with mobility impairments.
- At primitive tent sites, existing fireplaces that have deteriorated to the point that they need to be substantially rebuilt will be removed and replaced with fire rings.
- DEC will conduct an inventory to determine the extent to which roadside camping exists in Wild Forest areas park-wide. Further, the Department will consult with APA to establish design criteria for campsites accessible along roads.

4. All Terrain Bicycle (ATB) Trails

Present Conditions:
All terrain bicycles (a.k.a. mountain bikes) are currently restricted from the Lake Harris Campground - Santanoni Gatehouse trail. All other trails in the VMWF are currently considered open to ATB's. The APSLMP guidelines for Wild Forest allow for the use of ATB's "on roads legally open to the public and on state truck trails, foot trails, snowmobile trails and horse trails deemed suitable for such use as specified in individual unit management plans." Therefore, it will be decided in this UMP, which truck trails, foot trails, and snowmobile trails (there are currently no designated horse trails in the VMWF) will remain open to ATB use.

Data on current use of ATB's on VMWF roads and trails are unavailable. Many of the trails in VMWF, with a few exceptions, are generally too rough or steep for all but the most advanced riders. This fact, coupled with DEC staff observation, suggests that ATB use of VMWF roads and trails is low. Not surprisingly, corresponding impacts from ATB use are low, as well. However, the Stony Pond, Vanderwhacker, and Cheney Pond - Irishtown snowmobile trails, as well as a few local dirt roads, do appear in a handful of guidebooks on mountain biking in the Adirondacks (see Bibliography). The trail to Stony Pond, as well as some dirt roads in the area (including the Roosevelt truck trail, Moose Pond Road, Northwoods Club Road, etc.), have been rated as beginner or easy intermediate, but these guidebooks generally rate the Cheney Pond - Irishtown trail as expert only, due to rough, rocky, and root-ridden conditions. The Vanderwhacker snowmobile trail appears in at least one publication (and is unrated), yet it is generally too wet and too rough to be suitable for ATB use. Some trails in the area are wholly inappropriate for ATB use due to excessive grade (e.g., the Vanderwhacker Mountain tower trail) and are likely never used by ATB'ers. Other trails in the unit may or may not be inappropriate for ATB use and will be discussed under "Management Actions" below. To determine whether particular trails are suitable for continued ATB use, trail characteristics such as grade, drainage, conflicts with other recreational activities, private land crossings, level of difficulty, and connectivity to other ATB-suitable trails must be considered.

Objectives:

- To comply with State Land Master Plan guidelines concerning use of ATB's in Wild Forest.
- To provide appropriate ATB opportunities that are desirable by the public and are consistent with the protection of natural resources.

Management Actions:

- VMWF roads legally open to the public will remain open to ATB's.
- Designate the Roosevelt truck trail as open to ATB's. As a road maintained for administrative motor vehicle traffic, this truck trail is suitable for ATB use.
- Designate the Linsey Marsh trail as open to ATB use.
- Designate the Stony Pond and Cheney Pond - Irishtown, snowmobile trails as open to ATB use.
- Design the proposed new Lake Harris Campground - Santanoni Gatehouse snowmobile trail according to guidelines and standards listed in Appendix O, so that it will be suitable for ATB use.
- Post the following foot trails as closed to ATB use: Vanderwhacker Mountain tower trail, Rankin Pond trail, and Hewitt Pond trail. Significant portions of these trails are too steep and rough to support ATB use and currently see little, if any, ATB use.
- The Center Pond trail will be closed to ATB use, by virtue of the fact that it is accessed via the Hewitt Pond foot trail (closed above). Furthermore, this trail is quite short (~0.2 miles) and currently receives no known ATB use.
- Post the north end of the Hoffman Notch trail as closed to ATB use since it connects to an area that, pursuant to the APSLMP is already off-limits to ATB use - the Hoffman Notch Wilderness.
- The Boreas River Loop trail will be closed to ATB use. The narrow, twisting, and rough nature of this relatively short trail makes it unsuited to ATB use. As a result, this trail likely sees little, if any, current ATB use.
- The Lake Harris Campground - Santanoni Gatehouse trail will remain closed to ATB use due to the potential for user conflict.
- Post the Vanderwhacker snowmobile trail as closed to ATB use due to the private land crossing at its north end and to the many wetlands crossings along its length. This is not a trail anyone would bike twice, and currently sees little, if any, ATB use.
- ATB use of the VMWF portions of the Horseshoe Pond bypass snowmobile trail, the Charley Hollow Road snowmobile trail, and the northwest branch of Thilo Road snowmobile trail will be allowed.[2]
- Post the VMWF portions of the Roaring Brook, Rabbit Pond and Oak Ridge trails as closed to ATB use since the portions of these trails on Little Gore and on Gore Mountain Ski Area are not currently open to ATB use.

D. Historic Resources

1. Ranger Cabin and Garage

Present Conditions:

The old Ranger cabin and associated garage, located alongside Route 28N near the Minerva-Newcomb town line, have been used over the years by DEC for different administrative purposes. They are not manned, but instead are currently used for equipment storage. They are nearing the end of their

[2]This is a change from the May 2004 Draft UMP for Public Review. A representative of the Town of Schroon's mountain biking initiative has assured the Department that public ATB use is allowed on the private land portions of these trails.

usefulness in the management of the unit and there is an obvious financial burden in maintaining them. However, these buildings are among the few remaining examples in the Adirondack Park of a standard design used by the Conservation Department in the 20's and 30's, and are thought to have been built by the Civilian Conservation Corps (CCC).

Existing state laws may be somewhat at odds with each other on how to deal with the buildings. The APSLMP discourages the retention of manned ranger stations in Wild Forest, though these buildings are not manned and do not function as an APSLMP-defined "Ranger Cabin." The APSLMP also allows for the "maintenance and rehabilitation... to the extent essential to the administration and/or protection of state lands or to reasonable public use thereof" of "storage sheds and similar rustic buildings for use of administrative personnel", though it would be difficult to argue that these buildings could be maintained per that guideline. The APSLMP also contains so-called "Special Management Guidelines" that may apply to these buildings as "historic buildings, structures, or sites not part of a designated historic area." These guidelines dictate that the management of such lands will not be "less restrictive than that of the major land classification in which they lie." They also state, "[s]pecial interest areas will receive appropriate publicity and particular attention will be given to interpretive signing." They further state that, "where over use or destruction of unique and fragile resources is a threat, special measures will be taken to protect their integrity...." Furthermore, if the buildings and/or site are eligible to be listed on the State Register of Historic Places, and thus historically significant, the Department must also adhere to §14.09 of the Parks, Recreation, and Historic Preservation Law (SHPA). This law states, in part, that DEC "shall fully explore all feasible and prudent alternatives and give due consideration to feasible and prudent plans which avoid or mitigate adverse impacts on such property." According to a recent evaluation by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), the buildings meet eligibility criteria for listing on the State Register of Historic Places, and thus are historically significant.

Seven alternative actions are under consideration, and are outlined below.

Abandonment Alternative - Cease the current low level of DEC maintenance, which has included hazard tree removal, and minor work to keep animals and weather out of the buildings. This strategy will lead to the eventual collapse and loss of the buildings. In this state, they may become an attractive nuisance, due to their proximity to a major thoroughfare; making this an irresponsible alternative. Furthermore, this alternative would be considered an adverse impact under 9 NYCRR 428.7(a)(4), which reads, in part, "In determining whether an undertaking will have an adverse impact on eligible or registered property, the commissioner [of OPRHP] shall consider whether the undertaking is likely to cause... neglect of the property resulting in its deterioration or destruction."

Maintenance Alternative - Preserve the buildings without providing interpretation. Implementation of this alternative will ensure the preservation of the buildings and their historical significance, and may serve to keep financial costs down through the absence of interpretive, monitoring, and enforcement costs associated with increased visitation. The financial cost of implementing this alternative has not yet been determined. An initial estimate places the financial cost somewhere between $5,000 and $10,000 per building, based on replacement of the buildings' cedar shake roofs.

Maintenance and Interpretation Alternative A - Preserve the buildings and provide limited interpretation. This might include installation of interpretive signage/panels describing the history of the buildings and who used them and the nearby Forest Preserve, as well as their historical context. This would be achieved through a limited number of outdoor panels without providing public access to the buildings' interiors. The cost of implementing this alternative would include the cost of the Maintenance Alternative, plus the cost of developing, installing, and maintaining outdoor interpretive signage.

Maintenance and Interpretation Alternative B - Preserve the buildings, open them to the public, and provide indoor interpretation. The obvious disadvantage to this alternative is the financial cost - not only of maintenance, but of interpretation, monitoring, and enforcement - which would be prohibitive. Another disadvantage, especially of indoor interpretation, is that the buildings alone may not be sufficient to serve as a destination. The number of people likely to visit such a site may not justify the expense of such improvement and interpretation, especially without a volunteer organization willing to "adopt" the project and establish some appropriate, inventive, consequential and lasting use.

All maintenance alternatives will require that the buildings be maintained in a manner that does not disturb the existing wild forest character of the state land. For any of the maintenance alternatives to be implemented, a full engineering inspection must be performed to determine necessary repairs and approximate financial costs.

Demolition Alternative - Raze the buildings and dispose of the materials in an appropriate manner. This alternative demands a one-time financial cost for destruction and disposal, but no future monetary costs. Although unlikely, one or both of the buildings could be surplussed, potentially reducing the financial cost to the State of implementing this alternative.

Relocation Alternative - Disassemble the buildings and re-build them at another, non-Forest Preserve location. A local government would move the buildings from state land and use them for tourism information and/or interpretation. In this way, the buildings would be preserved and used in a worthwhile way. There has been some interest by the Town of Newcomb to move the buildings to a site adjacent to Newcomb Town Hall and use them for tourism information and education. However, it was determined that the financial cost of relocation was such that the Town could not afford to pursue it. Another disadvantage to this alternative is that relocation will likely make the buildings ineligible for listing on the State Register of Historic Places.

No Action Alternative - Continue the current low level of maintenance without considering what to do once that is no longer sufficient to keep the buildings intact.

The financial costs associated with the above alternatives have not yet been determined, but two of the alternatives can be ruled out immediately, nonetheless. The No Action alternative is irresponsible, because the time may soon come when the current low level of maintenance will no longer be enough to keep the buildings intact. Eventually, they will require major rehabilitative work, and a decision regarding their future should be made sooner rather than later. The Abandonment Alternative is unacceptable because it creates an attractive nuisance and would be considered an adverse impact under 9 NYCRR 428.7(a)(4).

The Demolition Alternative is acceptable, but since the buildings have been found to have historical significance, the Department has a heightened responsibility to preserve them and will have to consult with OPRHP to determine mitigation, which might include detailed documentation prior to demolition. The Maintenance Alternative is also acceptable, but the monetary cost of extensive maintenance may be high. Maintenance and Interpretation Alternative A is considered slightly preferable to the Maintenance Alternative, because limited outdoor interpretation could potentially add little cost to the overall financial cost of maintenance, yet this alternative could perform an important role not only in preserving, but in interpreting a State historic resource. The financial costs of interpretation associated with Maintenance and Interpretation Alternative B are too great. Providing indoor interpretation will be too great a financial drain for a site of this scale and location. The Relocation Alternative is acceptable and may prove to be less costly to the state in the long run, if there is an interest by a local organization or government.

However, the financial cost of relocation by a local organization or government may be prohibitive. Furthermore, relocation will automatically render the buildings ineligible for listing on the state register.

Objectives:

- To protect the Wild Forest character and natural resource quality of the Adirondack Park, through adherence to the guidelines of the State Land Master Plan and related law.
- To protect the State's historic resources through adherence to the State Historic Preservation Act.

Management Actions:

- Since OPRHP has found the buildings to be eligible for listing on the State Register of Historic Places, the Department has a heightened stewardship responsibility as mandated by the State Historic Preservation Act. In year one of the UMP, DEC Operations will conduct inspections of the buildings to determine the financial costs of implementing the Maintenance Alternative, Maintenance and Interpretation Alternative A, the Demolition Alternative, and the Relocation Alternative. In the event that the initial costs of the preferred alternatives are comparable, the Department will pursue Maintenance and Interpretation Alternative A. If the initial or annual costs of this alternative are too great compared to the cost of relocation or demolition, the Department will pursue the Relocation Alternative. DEC will work with the Town of Newcomb or another municipal government to relocate the buildings to the Newcomb Town Hall, or another appropriate site. The Department will support attempts to obtain funding for the job. DEC will also work with other organizations interested in partnering and developing plans for use following relocation and restoration. If after four years from commencing with the Relocation Alternative, sufficient funding and an appropriate site have not been identified, the Department will pursue the Demolition Alternative. In comparing costs - both historical and environmental - of the above alternatives, the Department will consult with the APA and the OPRHP.

2. Vanderwhacker Mountain Fire Tower

Present Conditions:

The APSLMP states, "fire towers and observer cabins will be allowed [in Wild Forest areas]... and their maintenance [and] rehabilitation... permitted. The educational and informational aspects of certain fire towers [and observer cabins] should be encouraged."

Prior to 2003, the Vanderwhacker Mountain fire tower had not received much maintenance or other attention since its abandonment in the 1980's. There is a renewed interest in rehabilitating fire towers in the Adirondacks and elsewhere. In 2001, a "Friends of Vanderwhacker Mountain Fire Tower" group (FoV) was formed in the interest of rehabilitating the tower so it could be open to the public for its valuable scenic and educational character. The group has adopted the following mission statement: "An organization of people dedicated to restoring, preserving, and promoting the stewardship of the Vanderwhacker Fire Tower, observer's cabins, and the public lands adjacent to it." In 2002, the group entered into an Adopt-a-Natural-Resource Stewardship Agreement (see ECL §9-0113) with the Department which allows them to perform specific tasks relevant to rehabilitating the tower and enhancing its recreational and educational potential. In 2003 and 2004, Department staff, Student Conservation Association (SCA) volunteers and FoV volunteers completed much-needed maintenance of the tower and associated trail. The tower was painted, two of its concrete footings repaired, the cab floor replaced, and many new waterbars were installed along the trail to the summit. Future maintenance will focus on additional trail work, as well as repair/replacement of the tower's windows.

Additionally, the summit of the mountain is specifically listed in the APSLMP as a Scenic Special Management Area [emphasis added]. Were the tower not present, the 360-degree, spectacularly scenic view, would be greatly diminished - by roughly 330 degrees. Furthermore, the APSLMP (pg 91) specifically recognizes this view - "Vanderwhacker Mountain... provides perhaps the best view of the High Peaks from the south in the Park." Again, if the tower were not present, this statement could not be made.

Except for regular blowdown removal, the trail to the tower has seen limited maintenance over the years. The trail was likely designed to withstand very light use by the observers and occasional hikers, not the hiking traffic it currently receives nor is likely to receive in the future. As a result, there are several sections where the trail is quite steep. In 2003 and 2004, a number of waterbars were installed on the lower and middle portions of the trail by SCA crews. In order to protect the trail from further soil erosion and to prepare for increased use, further trail work, including a re-route is recommended and will be described below.

Moose Pond Road, which currently receives little DEC maintenance, leads to the Vanderwhacker Mountain Fire Tower trailhead and eventually to a private hunting club. It is considered a qualified abandoned town road by the Town of Minerva (since 1927) and therefore receives no Town maintenance. The owners of the inholding have rights of access and have traditionally maintained the road. However, maintenance of the road is also in the interest of the People of the State of New York as it provides the best access to the fire tower and its breathtaking views. (See page 52 for additional information).

Objectives:

- To recognize the historic and cultural significance of the Vanderwhacker Mountain fire tower and associated facilities, and to effect its restoration, thereby allowing the public to access and appreciate it in a safe manner.

Management Actions:

- Inspect the tower for structural integrity and develop a list of repair work necessary before it can be opened to the public. Repair work may include replacing missing window panes and guy wires.
- The volunteer group will likely raise money and public interest, and work with DEC Forestry, Operations, and Forest Ranger staff to make repairs to the tower and associated facilities (observer's cabins, foot trail, etc.), such as minor carpentry work, window replacement, and trail maintenance. The group may also develop interpretive signing to be installed in and around the tower. Such signing may include installation of numbered signs at intervals along the tower trail and creation of a corresponding educational brochure, in order to form an interpretive trail.
- Cooperate with the "Friends" group to add the Vanderwhacker Mountain tower to the multiple property nomination for listing in the State/National Register of Historic Places, with other Adirondack and Catskill fire towers. All work related to the rehabilitation of the tower shall be reviewed and evaluated in accordance with the New York State Historic Preservation Act of 1980.
- Monitor the Vanderwhacker Mountain Fire Tower, trail, and associated facilities for signs of overuse. Remedies for the impacts of overuse will include installation of additional water bars, stepping stones, and/or dry tread, and may also include temporary/seasonal closing of facilities and development of a loop trail to the tower using a portion of the Old Military Road. The Department and the Moose Pond Club may also work together to discourage the public from driving the Moose Pond Road during mud season, in order to protect the tower trail, as well as the

road, from negative impacts due to foot and vehicle traffic during mud season.

- Support the establishment of a Tower Steward position, if funding permits, to provide interpretive programs at the renovated fire tower during peak periods of use.
- Work out an appropriate and amenable arrangement with the owners of the Moose Pond Club inholding, to determine a way to share future maintenance responsibilities of Moose Pond Road.
- Change the road sign identifying Moose Pond Road as a "Private Way" in order to reflect the public nature of that road.
- Construct a re-route of the tower trail (approximately 500 ft north of the observers' cabins) for a distance of approximately 500 feet. The current section of trail goes straight up the fall line. The re-route will follow a gentler grade by traversing sideslope and incorporating switchbacks.
- Continue the recent maintenance project initiated in 2003 through the installation of additional water diversion structures to the middle and upper portions of the trail and the installation of stepping stones (approximately 6 or 7) in a wet section of trail southeast of the intersection of the tower trail and snowmobile trail.

E. Public Use and Access

1. Public Use

Present Conditions:
Accurate figures for the public's use of the unit are not available. Incomplete trail register data exists, and some trends can be noted on public use. Primarily, use is concentrated seasonally at a few locations. The public's use of the area, as with most of the Forest Preserve, is free and relatively unregulated. Regulations do exist for certain activities such as camping group size and length of stay, and the DEC requires the issuance of a Temporary Revocable Permit for organized activities mainly involving competitive events or large gatherings.

Objectives:

- To enforce existing laws, rules, regulations and policies.
- To permit and encourage recreational use levels consistent with the protection of the unit's natural resources and character.
- To provide users with information on the unit and its facilities, and the appropriate use of the area.
- To identify and develop methods to monitor public use accurately.
- To minimize user conflicts by providing appropriate information to visitors.

Management Actions:

- Develop a Vanderwhacker Mountain Wild Forest brochure that details the unit's history, recreational opportunities, and use guidelines. The brochure will include a unit map showing present boundaries of VMWF parcels and existing trails, parking lots, lean-tos, or other important public facilities. Such map will be updated periodically as facilities are created or removed and as funds are made available. The DEC website may also be updated to include a VMWF page, such as exists for other state land units.
- Develop LAC indicators and standards for managing conflicts between different user groups.
- Supplement trail register data with site sampling techniques (trail timers, head counts, infrared counters, surveys, etc.) to determine actual public use numbers.
- Develop a system to monitor the public use of the area. Establish and maintain register journals at popular lean-tos.

- Employ the "minimum tool" necessary to regulate public use, using indirect methods whenever possible (such as limiting parking) and direct methods such as regulations when necessary.
- Install registers at unit trailheads as outlined in "Trailheads" above.

2. Access for Persons with Disabilities

Present Conditions:
To date, no universally accessible structures or improvements have been designed or constructed in this unit. In 1997, DEC adopted policy CP-3, Motor Vehicle Access to State Lands under Jurisdiction of the Department of Environmental Conservation for People with Disabilities, that establishes guidelines for issuing Temporary Revocable Permits allowing qualified people with disabilities to use motor vehicles to access designated routes on certain state lands. According to the policy as it applies to the Forest Preserve, on lands classified as "Wild Forest" and "Intensive Use," people with qualifying disabilities may obtain permits to use motor vehicles in certain specified locations which are not open to motor vehicle use by the public. A recent settlement agreement reached in U.S. District Court [Galusha et al v. NYSDEC, et al, Consent Decree, U.S. District Court of NY, 7/5/01] requires the State to allow disabled persons, by permit, to use motor vehicles on certain specified roads that are closed to general public motor vehicle use. No specific locations for such use were identified in the Vanderwhacker Mountain Wild Forest. Nonetheless, appropriate access development opportunities for persons with disabilities do exist within the unit and more will be identified through the management actions described below.

Objectives:
- To ensure Department compliance with the Americans with Disabilities Act - Title II, the proposed and adopted ADAAG, and Section 504 of the Rehabilitation Act by improving access and creating recreational opportunities for people with disabilities.

Management Actions:
- Conduct a formal inventory of all facilities within the unit to assess the level of accessibility provided to people with disabilities. This formal inventory will examine each facility (such as a trail, lean-to, picnic area) in terms of the standards established by ADAAG, either adopted or proposed. To ensure that new facilities and applicable alterations to existing facilities are compliant, this activity will be scheduled and conducted during the first year of this five year plan.
- Involve a knowledgeable representative from the community of people with disabilities in the facilities inventory and in all subsequent projects and proposals.
- Cooperate and serve a leadership role in working with local businesses and others in expanding access opportunities for all individuals, consistent with the protection of the area's natural resources.
- Include information on the level of difficulty visitors can expect to encounter when accessing the various facilities of the unit. Include this information at all appropriate trailheads, on the Department's Website and in the area brochure proposed above.
- Assess the recently purchased Balfour Lake property and develop an ADAAG compliant canoe launch, if location is suitable.
- Assess the canoe launches at Cheney Pond and Oliver Pond for access by persons with disabilities, and upgrade to appropriate ADAAG, if possible.
- Maintain the 0.7 mile long Cheney Pond access road, including filling potholes and brushing out the immediate right-of-way, where necessary. Maintenance of this road is important, because Cheney Pond is one of few VMWF waterbodies that could be made accessible by motor vehicles to people with disabilities.
- Assess the campsites on Northwoods Club Road and develop two to appropriate ADAAG for camping, as discussed in "Campsites" above.

- Open 2 miles of the Roosevelt truck trail (beginning at 28N) to motor vehicles by persons with disabilities only (CP-3 permit holders[3]), construct 2 primitive tent sites to ADAAG along the trail, and enlarge the small parking area at the south end of the truck trail. See Appendix J for more details.
- As required by the Consent Decree, construct a horse mounting platform in the vicinity of the Ash House at Camp Santanoni, in consultation with APA.

ALTERNATIVES

No Action or Need for a Plan

From a legal perspective, the No Action alternative is not an option. Section 816 of the Executive Law (Adirondack Park Agency Act) requires the Department of Environmental Conservation to develop, in consultation with the Adirondack Park Agency (APA), individual unit management plans (UMPs) for each unit under its jurisdiction classified in the Adirondack Park State Land Master Plan (APSLMP). In addition a UMP serves as a mechanism for the Department to study and identify potential areas for providing access to the Forest Preserve for persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA). The UMP also serves as an administrative vehicle for the identification and removal of nonconforming structures as required by the APSLMP.

From an administrative perspective, the No Action alternative is not an option, because the UMP provides for guidance necessary for staff to manage the lands of the unit in a manner that is most protective of the environment while at the same time providing the most enjoyable outdoor recreation opportunities for the public. Without the UMP, the sensitive environmental resources of the unit could be impacted negatively. It is highly likely that public enjoyment of such impacted resources would decrease. Management of the lands of this Unit via a UMP allows the Department to manage use of the lands in order to improve public use and enjoyment of the area, avoid user conflicts and prevent over-use of the resource (e.g., through trail designations, access restrictions, placement of campsites and lean-to in relation to a sensitive resource, etc.).

[3]Pursuant to Commissioner's Policy #3 - Motor Vehicle Access to State Lands under the Jurisdiction of DEC for People with Disabilities

SECTION V: SPECIAL AREA MANAGEMENT PLANS

Sand Pond Mountain Silvicultural Parcel and North River Mountains Silvicultural Parcels Sub-Plan to the Vanderwhacker Mountain Wild Forest Unit Management Plan

A. Area Description

Both areas are lands gifted by Finch, Pruyn & Company, Inc. to the state in 1962 for "the purposes of silvicultural research and experimentation in the science of forestry, including purposes incidental thereto..." pursuant to ECL §9-0107(2). They are located in the eastern central portion of the Adirondack Park, specifically in Essex County in the Towns of Newcomb and North Hudson. The Sand Pond Mountain parcel (2,426 acres) is to the north of and directly adjacent to the Hoffman Notch Wilderness Area. The North River Mountains parcels (3,684 acres) surround approximately 2,150 acres of VMWF Forest Preserve lands on the spine of the North River Mountains and are adjacent to the High Peaks Wilderness Area, near the Newcomb/North Hudson Town line. Both areas are located in Totten and Crossfield's Purchase, Townships and great lots are listed below:

2,426 acre Sand Pond Mountain parcel:

Township 44

- Lot 1
- portions of Lots 2, 7, and 8

3,684 acre North River Mountains parcels:

Township 45

- Lots 15 and 29
- portions of Lots 30, 31, 41, and 42

Township 46

- Lots 25, 26, 46, and 51
- portions of Lots 23, 24, 45, 49, 50, 52, 69, 70, 71, and 72

The Sand Pond Mountain Silvicultural Parcel has no frontage along a public road. The only public access is via the Hoffman Notch trail, which runs north-south through the middle of the parcel for approximately 2 miles. Access to the trail from the south is via Loch Muller Road and through the Hoffman Notch Wilderness Area. Access to the trail from the north is via the Blue Ridge Road and by easement across lands owned by Finch, Pruyn & Company, Inc. There is a parking area on the south end large enough for several vehicles, and a smaller parking area on the north end large enough for 1 or 2 vehicles only. There are no other DEC trails or facilities within the parcel. Since the Sand Pond Mountain parcel is directly adjacent to and connected via foot trail with the Hoffman Notch Wilderness area, and does not abut any other lands of the VMWF, it might be preferable to manage the Sand Pond Mountain parcel as a part of the HNWA rather than as a part of VMWF.

The North River Mountains Silvicultural Parcels have no road frontage and contain no DEC facilities. They are almost completely surrounded by private lands and are only accessible to the public via bushwhack from the High Peaks Wilderness Area. Additionally, not all VMWF lands in the North River Mountains are considered "silvicultural lands." In 1936, the state purchased approximately 2,150 acres in the mountain range consisting of mainly the higher elevations. This acreage was not received under ECL §9-0107(2) and is Forest Preserve.

B. History

In the 1950's and 1960's, Finch, Pruyn & Company, Inc. gifted land to the state in several locations under provisions of the Environmental Conservation Law (ECL) that allowed the state to accept gifted lands to be used for "*forestry purposes*." The original law made no mention as to what would happen if the gifted lands were inside the Adirondack Park. However, in 1960, a subsequent statute was passed (now ECL §9-0107(2)) that allowed the state to accept gifted lands in Forest Preserve counties "for use for the purposes of silvicultural research and experimentation in the science of forestry to the end that forest practices most beneficial to the economy of the state and to the health, welfare and comfort of the people of the state may be ascertained and demonstrated." The statute further states that such lands "shall not become a part of the Forest Preserve." Two of these locations would later be classified as Wild Forest and become a part of the VMWF; the Sand Pond Mountain Silvicultural Parcel and the North River Mountains Silvicultural Parcels. The area of these lands totals 6,110 acres.

Litigation concerning these gift lands was recently settled (Finch, Pruyn & Company, Inc. v. Erin Crotty, Supreme Court, County of Albany, Index No. 6370-01). In 2002, Finch, Pruyn & Company, Inc. initiated a lawsuit against the Department alleging that the DEC had neglected its responsibility to manage the properties for silvicultural research and experimentation in the science of forestry, and thus, the lands should revert back to Finch Pruyn. In regard to the lands gifted in 1962, which include both the Sand Pond Mountain parcel and the North River Mountains parcels, the court found that the Department did not mismanage these lands. The court held that the Department has the discretion to determine the management of these lands within the confines of ECL §9-0107. Moreover, the court held that even if the Department had violated conditions in the deeds, there is no language in the deeds that would indicate the properties should be returned to Finch Pruyn.

C. Terrain and Soils

The terrain and soils of both areas can be described as generally rough and steep, providing one probable reason as to why the areas were given to the State. The Sand Pond Mountain parcel has two major north-south ridges running through it, Washburn Ridge and Hornet Cobbles. Together they form the steep walls of the valley of Hoffman Notch Brook, which drains much of the parcel. In the extreme western corner of the parcel lies Sand Pond Mountain at 2,936 feet (895m). Elevation on the parcel ranges from about 1,230 feet (375m) along Hoffman Notch Brook to 3,054feet (931m) at a point along the north end of Washburn Ridge.

The North River Mountains "gift" lands consist of the middle elevations of the range, as the higher elevations, including Rist Mountain and Cheney Cobble were sold to the State in the 1930's. Much of the area is also quite steep and the elevation ranges from about 1,772 feet (540m) on the western edge of the parcel to around 3,100 feet (945m) in several places along the flanks of the range.

Soils in both areas are mainly of the Rawsonville, Mundal, Ricker, and Hogback series. Rawsonville series consists of moderately deep, well-drained soils formed in loamy glacial till. Mundal series consists of moderately well-drained soils, formed in compact loamy glacial till. Ricker series consists of very shallow and shallow, well-drained to excessively drained soils formed in thin organic deposits. Hogback series consist of shallow, well-drained soils, formed in loamy glacial till.

D. Vegetation

Plant life in both areas is generally similar to other areas of VMWF. Spruce-fir stands are common to the higher elevations. In the lower elevations, northern hardwood forests predominate. In addition, evidence of strong fires can still be seen in parts of the North River Mountains, which burned in the 1930's.

E. Fish and Wildlife.
Fish and wildlife information for the silvicultural parcels will be found in appropriate sections and appendices of the Vanderwhacker Mountain Wild Forest Unit Management Plan to which this sub-plan is appended.

F. Public Use
Public use of the North River Mountains area is unknown, but is likely extremely infrequent, due to the area's inaccessibility. Lessees on neighboring industrial and working forest lands may occasionally use the area for hunting, fishing, trapping, and other uses, but such information is unavailable.

Public use of the Sand Pond Mountain parcel includes hiking, nordic skiing, and hunting and is likely comparable to use of the adjacent area of Hoffman Notch Wilderness Area. Most use of the silvicultural parcel is concentrated to foot traffic along the Hoffman Notch trail, 2 miles of which run through this parcel.

G. Management Goals
There are no currently identified projects requiring silvicultural research. The Department proposes to study and investigate potential projects for silvicultural research and experimentation in the science of forestry that would be compatible with the other management objectives of these parcels and adjoining Forest Preserve parcels, to be addressed in future UMP revisions. Pending the resolution of the constitutional issue, the parcels will be managed in a manner consistent with Article XIV of the New York State Constitution and in conjunction with the rest of the Vanderwhacker Mountain Wild Forest.

Management Proposed[1]
No specific management activities are proposed. As for the portion of the Hoffman Notch trail through VMWF, no management beyond routine maintenance is proposed. Since the majority of the length of the trail is located within the Wilderness area, any management activities related to that trail should be addressed in the Hoffman Notch Wilderness Area Unit Management Plan and followed by revisions or amendments to the Vanderwhacker Mountain Wild Forest Unit Management Plan, if necessary.

[1]New development since the release of the VMWF draft UMP for Public Review: the North River Mountains and Sand Pond Mountain parcels are currently under consideration by the APA for reclassification as Wilderness and addition to the High Peaks Wilderness and Hoffman Notch Wilderness, respectively.

SECTION VI: SCHEDULE FOR IMPLEMENTATION

The following tables outline a schedule for implementation of the proposed management actions and their estimated costs. Accomplishments are contingent upon staffing levels and available funding. The estimated costs of implementing these projects is based on historical costs incurred by the Department for similar projects. Values for some projects are based on projected costs for service contracting. These cost estimates to not include capital expenditures for items such as equipment, nor do they include the value of program staff salaries.

Annual Maintenance and other Activities	Estimated Cost
Boundary line maintenance (204 miles) on a 7-year schedule	$11,500
Litter removal and annual maintenance of trails, pit privies, and signs	$10,000
Share cost of maintenance of Moose Pond Road with Moose Pond Club	$5,000
Continue removal of Japanese knotweed stand along Northwoods Club Road[1]	$750
Check fish barrier dam at Oliver Pond	**
Monitoring of impact on unit lands, waters, and facilities by Area Manager	50 person-days
Follow LAC steps to develop guidelines and standards to monitor environmental and sociological conditions	??
Monitor wildlife populations through analysis of harvest data. Inventory non-game, endangered, threatened, and special concern species as well as significant habitats	**
Survey ponds as required to monitor status of fishery resource and water chemistry	**
Stock fish in unit waters consistent with Bureau of Fisheries policies and Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation, Division of Fish and Wildlife	**
Maintain an active acquisition program pursuant to the Open Space Plan to acquire desirable parcels as availability and funding permit	**
Total Annual Costs	$27,250

** - normal program funding
? - Cost unknown, not part of normal program funding

[1]Efforts to eradicate this infestation are expected to take several successive years and will continue for as many years as are necessary

Year 1	Estimated Cost
Construct VIC - Santanoni trails	$3,300
Construct Gatehouse-Lake Harris Campground snowmobile/bicycle trail (including 1 bridge)	$9,600
Develop and print brochure	$5,000
Designate and construct snowmobile trail to facilitate access between hamlets of Minerva and Newcomb	$50,000 - $80,000
Conduct accessibility inventory	$15,000
Inspect Vanderwhacker Mountain fire tower and develop list of necessary repair work	2 person-days
Post "Wild Forest" signs at points where Schroon Lake snowmobile trails enter and leave VMWF. Add DEC snowmobile markers to VMWF trail sections.	$100
Remove old snowmobile trail markers from Linsey Marsh trail and post against snowmobile use.	$50
Install trail registers at Rankin Pond and Lester Flow trails	$450
Baseline inventory of all established campsites	$2,000
Mark/Post trails according to ATB-use designation	$200
Inspect Ranger Cabin and Garage, determine financial costs of implementing preferred alternatives and compare, consult with APA and OPRHP	20 person-days
Open 2 miles of the Roosevelt truck trail for CP-3 use and enlarge the south parking area	$10,000
Total Cost - Year 1	$126,000

Year 2	Estimated Cost
Construct bridges on Vanderwhacker snowmobile trail	$8,000
Build Balfour Lake canoe access site, bank stabilization and parking area (4-car)	$10,000
Construct snowmobile trail to facilitate access between Pottersville and Schroon Lake	$14,000
Close campsites that do not conform to separation distance guidelines	$650
Remove two fireplaces at west end of Oliver Pond	$100
Total Cost - Year 2	$32,750

Year 3	Estimated Cost
Maintain Cheney Pond access road and install boulders to prohibit trailered boat launching of trailered boats	$9,700
Build Cheney Pond lean-to	$9,700
Oliver Pond parking area work	$1,800
Construct Moxham Mountain trail and parking lot (3-car)	$12,300
Total Cost - Year 3	$33,500

Year 4	Estimated Cost
Construct Wolf Pond trail	$8,300
Build Wolf Pond lean-to	$9,700
Construct Raymond Brook drainage nordic ski trails and parking lots, after reaching agreement with neighboring landowners	$21,500
Formalize Vanderwhacker Pond trail and build parking lot	$8,000
Total Cost - Year 4	$47,500

Year 5	Estimated Cost
Upgrade upper portion of snowmobile trail between Stony Pond trail and Minerva hamlet center	$2,000
Work to restrict motorized access to Muller Pond	$3,000
Relocate Muller Pond tent site; designate and construct 2 additional sites	$1,500
Upgrade Northwoods Club Road campsites	$4,000
Surplus old Ranger buildings on 28N if no relocation site found	$0 - $10,000 depending on public interest to surplus
Update and re-print VMWF brochure and map	$5,000
Investigate and map remnant trails and paths at VMWF access from 28N in Newcomb	3 days
Remeasure/monitor all established campsites	$2,000

Year 5	Estimated Cost
Begin draft revisions for this Unit Management Plan	**
Total Cost - Year 5	$27,500

Cost Summary

Annual Maintenance Costs: **$132,500**
Five year annual total: **$267,750**
Total: **$400,250**

Other Activities (To be completed as soon as possible):

Activity	Division	Cost
Reach agreement with Moose Pond Club over cost-sharing of maintenance of Moose Pond Road, remove "Private Way" sign	LF LA	** **
Reach agreements with private property owners to build trail between Little Gore and Raymond Brook ski trails	LF LA	** **
Reach agreements with private property owners for snowmobile trail to facilitate access between Newcomb and Minerva	LF LA	** **
Reach agreements with private property owners for snowmobile trail to facilitate access between Pottersville and Schroon Lake	LF LA	** **
Complete land title and boundary line surveys as quickly as possible	LF	**
Develop a system to monitor public use of the unit.	LF LE	? ?

LF - Lands & Forests, LE - Law Enforcement, Op - Operations, LA - Legal Affairs

** - normal program funding
? - Cost unknown, not part of normal program funding

BIBLIOGRAPHY

Adirondack Cooperative Loon Project, http://www.adkscience.org/loons, 2003

Adirondack Mountain Club. 1995. "Adirondack Park Mountain Bike Preliminary Trail & Route Listing", Adirondack Mountain Club. Albany, NY

Andryle, R.F., and J.R. Carroll. 1988. The Atlas of Breeding Birds in New York State. Cornell University Press, Ithaca

Bent, A.C. 1989. Life Histories of North American Cuckoos, Goatsuckers, Hummingbirds, and their Allies. Dover Publications, Inc. New York.

Bishop, S. C. 1941. The Salamanders of New York. New York State Museum Bulletin 324:1-365.

Þrown, P. 1999. "Longstreet Highroad Guide to the New York Adirondacks", Longstreet, Atlanta, Georgia

Brown, W., M. Krasny, and N. Schoch. 2001. "Volunteer Monitoring of Nonindigenous Invasive Plant Species in the Adirondack Park, New York, USA", Natural Areas Journal

Bull, J. 1974. Birds of New York State. Comstock Publishing Associates, Ithaca.

Compton, BW., Rhymer, J.M. and M. McCollough. 2002. Habitat selection by wood turtles (*Clemmys insculpta*): an application of paired logistic regression. Ecology 83:833-843.

Conant, R. and J.T. Collins. 1998. A Field Guide to Reptiles and Amphibians, Eastern and Central North America. Houghton Mifflin Company, Boston.

DeGraaf, R.M. and D.D. Rudis. 1983. Amphibians and Reptiles of New England. The University of Massachusetts Press, Amherst.

Driscoll, C.T. et.al. 2001. "Acidic Deposition in the Northeastern United States: Sources and Inputs, Ecosystem Effects, and Management Strategies". *BioScience* 51:3, p. 180-198.

Driscoll, C.T., K.M. Driscoll, K.M.Roy and M.J.Mitchell (submitted Sept 2002) "Chemical Response of Lakes in the Adirondack Region of New York to Declines in Acidic Deposition". Environmental Science & Technology.

Driscoll, C.T., K.M. Driscoll, MJ Mitchell and DJ Raynal. 2002. "Effects of acidic deposition on forest and aquatic ecosystems in New York State". *Environmental Pollution*. (In Press).

Ehrlich, P. R., D.S. Dobkin, and D. Wheye. 1988. The Birder's Handbook: a field guide to the natural history of North American birds. Simon and Schuster, Inc., New York.

Fisher, D., Y. Isachsen, and P. Whitney. "New Mountains from Old Rocks: the Adirondacks" NYS Geological Survey Educational Leaflet 23

Fox, W. F. 1976. "History of the Lumber Industry in the State of New York", Harbor Hill Books, Harrison, New York

Garber, S.D. and J. Burger. 1995. A 20-yr study documenting the relationship between turtle decline and human recreation. Ecological Applications 5:1151-1162.

George, C.J. 1980. "The Fishes of the Adirondack Park". NYSDEC Publications. 93 pp.

Gooden, M. 2003. SUNY ESF. Personal communication. Newcomb, NY

Hammitt, W.E. and Cole, D.N. 1987. "Wildland Recreation: Ecology and Management". John Wiley and Sons: NY, NY.

Harding, J.H. 1997. Amphibians and Reptiles of the Great Lakes Region. The University of Michigan Press, Ann Arbor.

Healy, W.R. 1974. Population consequences of alternative life histories in *Notophthalmus v. viridescens*. Copeia 1:221-229.

Hunter, M.L., A.J.K. Calhoun, and M. McCollough. 1999. Maine Amphibians and Reptiles. The University of Maine Press, Orono.

International Mountain Biking Association. 2001. "Building Better Trails". IMBA. Boulder, CO

Johnsgard, P.A. 1990. Hawks, Eagles, and Falcons of North America, Biology and Natural History. Smithsonian Institution Press, Washington DC.

Kaufmann, J.H. 1992. Habitat use by wood turtles in central Pennsylvania.. Journal of Herpetology 26:315-321.

Kick, P. 1999. "25 Mountain Bike Tours in the Adirondacks", Backcountry Publications, Woodstock, Vermont

Klemens, M.W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut Bulletin No. 112. Connecticut Department of Environmental Protection, Hartford.

Kogut, K.L. 1979. An investigation of the breeding status and population distribution of the Northern Harrier (*Circus cyaneus hudsonius* L.) In New York State. NYSDEC, Delmar, NY. Mimeo. *In*: Andryle, R.F., and J.R. Carroll. 1988. The Atlas of Breeding Birds in New York State. Cornell University Press, Ithaca.

Lambert JD, SD Faccio, and B Hanscom, 2002. *Mountain Birdwatch: 2001 Final Report to the United States Fish and Wildlife Service*. Vermont Institute of Natural Science: Woodstock, VT.

Lashway, H. 2001. DEC Forest Ranger (retired). Personal communication. Schroon Lake, NY

Levine, E., ed. 1998. "Bull's Birds of New York State", Comstock Publishing, Ithaca, NY.

Masters, R. 2000. SUNY ESF. Personal communication. Newcomb, NY

Mather, F. 1884. Memoranda relating to Adirondack fishes with descriptions of new species, from researches made in 1882. Appendix E, New York State Land Survey. p. 113- 182.

McMartin, B. 1986. "Discover the Central Adirondacks", Backcountry Publications, Woodstock, Vermont

McMartin, B. 1994. "The Great Forests of the Adirondacks", North Country Books, Utica, New York

Minerva Historical Society. 1967. "Minerva 1817-1967; A History of a Town in Essex County, NY", Multiprint, Inc., NY, NY

Mitchell , J.C. 1994. The Reptiles of Virginia. Smithsonian Institution Press. Washington.

Natural Resources Conservation Service. 2000. Soils Mapping for Essex County

National Science and Technology Council Committee on Environment and Natural Resources. 1998. *National Acid Precipitation Assessment Program Biennial Report to Congress: An Integrated Assessment.* U.S. National Acid Precipitation Assessment Program, Silver Spring, MD. (www.nnic.noaa.gov/CENR/NAPAP/NAPAP_96.htm).

New York State Adirondack Park Agency. 2001. Adirondack State Land Master Plan. Ray Brook, NY

New York State Adirondack Park Agency. 2000. New York State Adirondack Park Wetland Boundaries in the Upper Hudson Drainage Basin Version 1.0. Digital map data.. Scale 1:24,000

New York State Department of Environmental Conservation, 1986 Black River Wild Forest Unit Management Plan, 2000 Camp Santanoni Historic Area Unit Management Plan, 1999 High Peaks Wilderness Area Complex Unit Management Plan

New York State Department of Environmental Conservation, 2003 Dix Mountain Wilderness Area Draft Unit Management Plan for Public Review, 2003 Giant Mountain Wilderness Area Draft Unit Management Plan for Public Review.

O'Neil, W. S. 1990 Air Resources and Quality in the Adirondack Park Technical Report 22. In: The Adirondack Park in the Twenty-First Century. Technical Reports, Volume One. The Commission on the Adirondacks in the Twenty-First Century, State of New York, Albany, NY.

Peek, J. M. 1997. Habitat Relationships in Ecology and Management of the North American Moose. Smithsonian Institution Press. pp. 351-376.

Pfingston, R.A. and F.L. Downs. 1989. Salamanders of Ohio. College of Biological Sciences, The Ohio State University, Columbus, Ohio.

Proskine, A. 1986. "Adirondack Canoe Waters; South and West Flow", Adirondack Mountain Club

Quinn, N.W.S., and D.P. Tate. 1991. Seasonal movements and habitat of wood turtles (*Clemmys insculpta*) in Algonquin Park, Canada.. Journal of Herpetology 25:217-220.

Ratcliffe, D. 1993. The Peregrine Falcon. T & D Poyser, London.

Reschke, C. 1990. Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Latham, NY 96 pp. + xi

Rist, L. Date unknown. "Chester to Canton Road", *Cloudsplitter Magazine*

Roberts, G. 2000. DEC Forest Ranger (retired). Personal communication. Indian Lake, NY

Saunders, D.A. 1989. Adirondack Mammals. Adirondack Wildlife Program, State University of New York College of Environmental Science and Forestry, Syracuse, NY.

Smith, H. P. 1885. "History of Essex County, New York", D. Mason & Co., Syracuse, New York

Thomann, G. 2001. "Mountain Biking in the Adirondacks", Singletrack Publishing. Scotia, NY

Tuttle, S.E. 1996. Ecology and natural history of the wood turtle (*Clemmys insculpta*) in southern New Hampshire. Master's Thesis, Antioch New England Graduate School, Keene, New Hampshire, 239 pages.

Tuttle, S.E. and D.M. Carroll. 1997. Ecology and natural history of the wood turtle (*Clemmys insculpta*) in southern New Hampshire. Chelonian Conservation and Biology 2:447-449.

US Department of Agriculture, Forest Service. 1990. "Silvics of North America: 1. Conifers; 2. Hardwoods". Agriculture Handbook 654. Burns, Russell M., and Barbara H. Honkala, tech. coords. USDA, Forest Service. Washington, DC.

Van Driesche, R. 2002. "Biological Control of Invasive Plants in the Eastern United States", USDA Forest Service

Van Valkenburgh, N. 1985. "Land Acquisition for New York State, An Historical Perspective", The Catskill Center, Arkville, New York

Wadsworth, B. 1986. "Guide to Adirondack Trails: Central Region", Adirondack Mountain Club

Watson, W. C. 1869. "The Military and Civil History of the County of Essex, New York", J. Munsell, Albany, New York